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Whither Britain?

By H. G. WELLS

A verbatim report of Mr. H. G. Wells' talk broadcast on January 9

THIS talk I am having with you this evening is an uncensored talk. It is a quite personal conversation about a matter that concerns us profoundly, the destiny of the country to which we belong.

Because the B.B.C. is a public organisation it is often supposed, especially abroad, that things said here on the air are officially sanctioned. This is certainly not how things are on this occasion. The B.B.C. is responsible for giving me this half hour with you—but nobody on earth, except myself, is responsible, and nobody's approval has been asked, for the things I have to say.

So perhaps I ought to warn you that some of the ideas I am putting before you may strike you as unorthodox. I shall be glad if you will hear me out but I do not want to occupy your time on false pretences. I am not, in the narrow sense of the word, a patriot—and I am no sort of nationalist at all. I am utterly opposed to those people who say 'Britain for the British and let all the rest of the world go hang'. If you are one of those who make that their first principle of political life, if you really feel the rest of the world outside your country is a lot of nasty foreigners who don't matter, then you will not like anything that I am going to say. I do not think you will even begin to understand what I am going to say. You will do

far better to switch off your receiver right now and leave me, so far as you are concerned, talking to the empty air.

But, mind you, if I do not call myself a patriot that does not alter the fact that I have an intense pride in being an Englishman. I glory in the English literature, in the English language, in the mighty fabric of modern science, which was so largely English in its beginnings, in our world-wide influence, in our splendid tradition of fair play and liberty. It is just because I have this intense pride in myself and our people that I will not consent to see the English mind and English life cooped up within the narrow bounds of nationalism. The whole of this little planet is not too big for Englishmen. We are a world-people and we belong to the world—and again I implore you, Mr. Patriot, if that is not to your taste to cut me off and have done with me.

Of course, there has to be a give and take in these matters. Free men who want to go unimpeded about the world must respect the pride and freedom of others. It isn't in the true English tradition to swagger about in a world of slaves. The rights of other peoples are conterminous with our own. They are entitled to the same planetary citizenship as ourselves. And since this is my belief then plainly my answer to this question 'Whither Britain?' must begin by asserting that the only reasonable and tolerable destiny I can see before our country and its

associated states and dependencies is to become, consciously and steadily, an integral part of one great world unity; to set itself steadfastly to assimilate and to dissolve into the *commonweal of mankind*.

I am quite prepared to find that you do not agree with me in this—that probably you are less prepared to agree with me in this than you might have been two years ago. I think people of my way of thinking have to realise that there has been an adverse turn in public opinion. All over the world a sort of spasm of nationalism has contracted men's minds—there has been a world-wide recoil into distrust, hatred and pessimism. All over the world people have been receding from internationalism—and doing barbaric and disagreeable things to aliens and strangers. They have all shrunk back within their own boundaries and barriers mentally and physically. The nations now are carrying on an intense, self-destructive, mutually destructive and economic warfare behind vast tariff barriers. They are also carrying on a cruel and disastrous financial warfare, a new sort of manœuvring with money and credit, of which the happier world before 1914 knew little or nothing. And finally, they are arming, arming, arming—drifting steadily towards nightmare possibilities of bloodshed, murder and destruction unheard of before in human experience. They don't want to do it, but they feel they have to do it—as if they were hypnotised. Although the development of disorder and the approach of war catastrophies are recognised on every side, there is great perplexity and a sort of world nervelessness about resisting this trend in things. So that for many dismayed spirits the answer to 'Whither Britain?' amounts practically to this: drifting with the rest of mankind towards catastrophe. There is no remedy, they say, for the economic trouble because 'doctors disagree' and there is no escaping war because, they say, *war is bound to come*. Fatalism—tempered in some cases by a feeble hope that perhaps Britain may escape the worst of the disaster.

But is it inevitable that the present poverty, under-feeding, under-education and degeneration of great multitudes must continue indefinitely and that there must be an ultimate smash into another war storm? I think these are highly probable things. But they are not inevitable things.

Last year I published a book called *The Shape of Things to Come* in which I tried to estimate the forces that make for human disaster. At the same time I sought whatever counter forces there might be to stave off or turn the tide of disaster. My attempt to analyse the situation worked out into a story first of a great world collapse and then of a slow recovery. But the forces that make for collapse and the forces that make for recovery are fighting all the time; it is impossible to make any real measure of their relative strength and so I do not see how anyone can tell just how far collapse has to go before recovery begins. I am convinced that our present trouble and danger still have a long way to go and that there is still going to be a world-wide need for fortitude, courage, sacrifice and effort. I think it is all nonsense to pretend that any real recovery has begun. Don't be misled by little partial flutters of business revival or Stock Exchange hopefulness. Nothing effective has yet been done in the way of setting up a barrier against war. And nothing fundamental has been done in the way of relieving the pressure of world-wide debt. Nevertheless, I do not see why the real turning point should not come in far shorter time than I put it in that prophetic work of mine. And anyhow—I do not believe that civilisation is doomed to a complete collapse, whatever strains and stresses we may have to face.

More stress and more struggle but ultimate recovery—the final establishment of a progressive and secure world civilisation—that is my guess in answer to the question 'Whither the World?' And now what may be—what will be—the share of Britain in that struggle and recovery? That is to say, what may be your share and mine in the fight for world peace and order ahead of us?

Let us bear in mind that, however cosmopolitan we may be in spirit and intention, our political behaviour depends upon the political institutions in which we live. We cannot get away from those. In spirit we may be citizens of the world, but in fact we are citizens of our own state. We cannot influence *world policy* directly because there are no such things yet as world citizenship or world policy, but we *can* influence the policy of our own country—and it is almost the duty of a citizen to do his utmost to influence it—so that the good of the whole world can be served.

And for us British subjects it seems to me that our paramount political idea should be that we do not sink into national self-seeking and isolation and decay and that we who have consolidated a great empire should press on to the greater task of consolidating the peace and order of the world. Let us work to make British citizenship into world citizenship.

I suppose if listeners could answer back I should hear a number of voices answering, 'And how?'

Well, I think it is possible to give an answer to that.

Let me be very clear about what I am driving at here. I think there are some very common misconceptions about the possibility of world unity. Too many people imagine that when a man talks of world unity he is thinking first and foremost of some sort of political unification. They suppose he is after a United States of the World, a Confederation of Mankind, with a president and a capital and all that sort of thing complete. That isn't at all the idea I have in mind. Like you and most other people, I have been thinking and learning pretty hard about the general human problem since the War (and I was at it even before the War) and everything I have thought and learnt has deepened my conviction that the way to human unity does not lie through political federations and unifications. I don't believe in the political world state. I mean we shall never get there by such unions as that which united Wales and Scotland and England or brought together, let us say, the former Austrian Empire. These were what I mean by political unions. They were not brought about without intense conflicts and stresses. To make political unions is to face the maximum resistance of old historical traditions, racial suspicions, vested interests, deep-rooted prejudices and habits of thought. But need we try that way? I want to suggest to you that human unity can quite possibly be got at along quite other lines at once more real and binding, and far less disturbing to accepted ideas. It is because I believe that there is this other way, that I am not much of an advocate of the League of Nations and not at all distressed by its present failure and decadence. The fundamental weakness of the League of Nations lies in the fact that it was and is primarily and essentially a political organisation. President Wilson was a man of noble ambitions and high tradition, but he had not the sort of intelligence that successfully analyses and grasps a novel problem. And so he provided for a sort of super-state, a world-size congress or parliament, that Council and Assembly of his, and he made a loose machinery for adjusting old-fashioned political differences and delaying and preventing declarations of war, because that was how he saw the problem; but the underlying realities beneath the political patchwork he did not appreciate. That League of his at Geneva provides no effectual means, no means worth talking about for dealing with the increasingly common economic life of mankind—with tariff-wars, for example, and commercial conflicts, with the adjustment of debts between different nations and between nations and foreign individuals, with the possibility of a world-money, with international banking, with the control of world posts and transport, with the manifest need for some world regulation of air travel, with emigration, with world health, with the conservation of the world's resources and all the other new activities in which the inevitable solidarity of human interests is becoming more obvious every day, and which—quite apart from the old-fashioned political patch-

(continued on page 83)

THE NOISE EVIL AND ITS ABATEMENT

An examination by experts of the medical, legal, architectural and scientific aspects of an urgent problem of our modern way of life

I—Noise and Nerves

By SIR JAMES PURVES-STEWART, K.C.M.G., C.B., M.D., F.R.C.P.

As a medical member of the provisional committee of the Anti-Noise League, I have been asked by our Chairman, Lord Horder, to present a few facts upon the medical aspect of the problem. It has long been recognised that the highest activities and general behaviour of human and other animals are mainly associated with the functions of the cerebral hemispheres. These hemispheres comprise many millions of inter-communicating branching sensitive nerve-cells, arranged in complex patterns, whereby every part of the cortex or surface-layer of the brain is linked up, directly or indirectly, with every other part.

Without wearying non-medical readers by complicated anatomical and physiological details, it may be mentioned that investigations during recent years, especially those carried out by the great Russian master, Pavlov, and his school, have established the fact that every activity of the brain may be regarded as a response to a stimulus. What particular response will actually result in any given instance depends partly on the nature and intensity of the stimulus (e.g., touch, pain, temperature, sight, taste, sound, etc.) and partly upon the nervous pathways already established within the brain, by experience, memory, and training.

The Mechanism of Hearing

Confining ourselves, for present purposes, to sounds and noises, i.e., to so-called auditory stimuli, these, of course, are produced by the effects of aerial sound-vibrations upon a special variety of 'receptor' nerve-cells, situated in the sense-organ of the ear. From there they pass along the auditory nerve into a special inward pathway, leading to a special auditory area of the cerebral cortex, where the vibratory stimuli are appreciated as sounds. The individual, by experience, learns to associate particular sounds or noises with various outside objects which produced the original aerial vibrations.

Some sounds are pleasant and even harmonious; for example, the voices of our friends, the calls of bird or beast, the rustling of the trees, the rush of wind, waves, or rain, or the notes of skilfully-played musical instruments. Other sounds, however, are unpleasant or even painful. These constitute what we call noises. By noises we mean sounds which are either sudden, or unduly intense, or which are discordant or non-rhythmic. Familiar examples

of discordant noises rise to our minds at once; for example, the shriek of a locomotive, the rattle of machinery, the noisy gear-changing of a motor-car, the explosions of a street-drill, the exhaust of a motor-cycle, the rattling of milk-cans in a lorry, the nocturnal barking of our neighbour's dog, and so on. Mere intensity of otherwise musical sounds may constitute a painful noise, e.g., that of a blatant loud-speaker or gramophone record. Whether ultra-modern music is to be regarded as a melody or a noise is a matter of opinion.

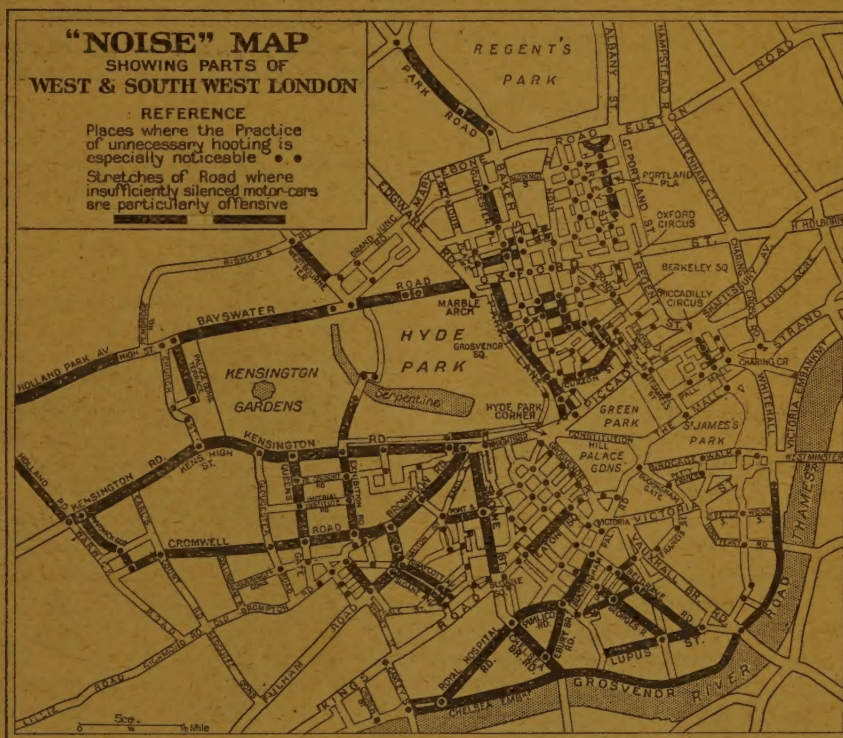
Incidentally, it is a curious fact that nearly all the sounds which we find unpleasant are produced by someone else. The individual who, wittingly or unwittingly, originates the unpleasant noise is usually indifferent to it himself, and also singularly apathetic as to its effects upon his fellow-citizens.

Reactions to Noise

The brain of each individual, when he receives the stimulus of noise, reacts in a particular manner, according to the variety and intensity of the sound or noise, and according to its apparent cause. Other things being equal, it is a matter of common experience that a sound which is gentle, especially if it is rhythmically

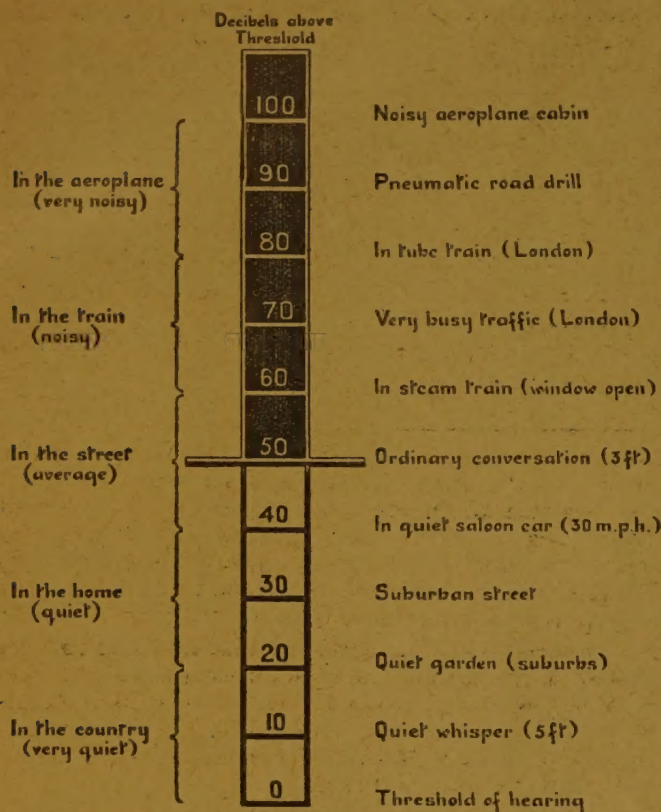
repeated, tends to elicit a trivial or moderate response by the individual, a reaction which is sometimes accompanied by a pleasant or soothing feeling-tone. This fact is sometimes taken advantage of, when a hypnotist induces the artificial hypnotic sleep by gentle monotonous verbal suggestions. On the other hand, a noise which is violent, non-rhythmic, sudden, startling, or unexpected, evokes from the individual an irritating and sometimes violent response. This response to unpleasant noises is primarily protective for the individual. In one person the reaction to an unpleasant stimulus is one of anger, together with combativeness. In another it is a reaction of fear, together with a tendency to flight or withdrawal from the source of the unpleasant noise. In either case the result is to get away from it.

Provided they are rhythmic and continuous, and expected by the hearer, some noises which originally caused irritation and discomfort may, in the course of time, cease to annoy the individual, who ultimately becomes accustomed to them. Such habituation, when achieved, indicates that the brain, by a process of active inhibition or suppression, has learned to ignore the original irritating noise. This is the case in many factory-



workers who are not merely undisturbed by the noise of the machinery but can actually converse in ordinary tones during noises which, to the visitor from without, constitute a deafening din. Nevertheless, it should be remembered that this process of suppression involves a diversion of nervous energy, which is sometimes greater

Loudness Levels of Common Noises



By courtesy of The National Physical Laboratory

in amount than the individual can really afford, if he is to remain in good health. Moreover, the personal and industrial efficiency of the worker is inevitably impaired by chronic noise.

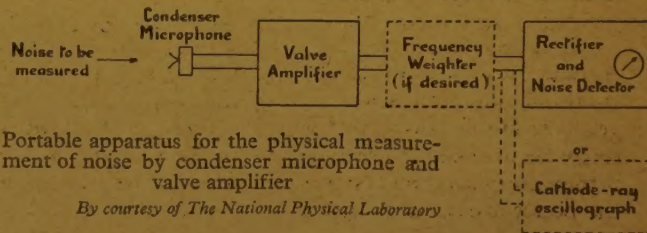
There is a popular idea that deafness brings silence. Unfortunately, however, it is rare for deaf persons to live in a pool of silence or even in a world of reduced sounds. On the contrary, as a distinguished otologist, Dr. Dan Mackenzie, has reminded us, in most cases of acquired deafness the patient really lives amidst noise, since coincidentally with his inability to hear external sounds he is annoyed by spontaneous noises in his head—so-called tinnitus or ringing in the ears. Such subjective noises are often continuous and incessant; they vary in character from hissing, humming and whistling noises, to loud crashing noises which may overwhelm the noise of ordinary street traffic. This torture of tinnitus is a severe strain to the brain of a sensitive individual and may even culminate in auditory hallucinations. Fortunately cases of this extreme severity are rare. More usually the sufferer gets used to his tinnitus, just as the factory-worker learns to ignore the noise of machinery.

Workmen who are habitually exposed to loud noises in the course of their employment tend, sooner or later, to become deaf. Such, for example, are boiler-makers (especially those working inside the boiler), also other metal-workers like blacksmiths, iron-turners, file-makers, and plate-makers; also spinners and weavers, machine-gunners and artillery-men. Noise-deafness of this sort is due to damage inflicted on the auditory nervous mechanism, especially of the inner ear, by the continued excessive stimulation of loud noises.

It is an interesting observation that, in the early stages of noise-deafness, as shown by Dr. Ritchie Rodger, the

maximum impairment of hearing corresponds to the pitch of the predominant note in the deafness-producing noise. Thus the boiler-maker, in whom the noise is made up mainly of high-pitched sounds, loses his hearing earliest for high-pitched sounds; whereas the 'beetler', whose occupation consists in finishing-off cotton cloth by the repeated impact of heavy logs or 'beetles', which make a deep thundering noise, loses his hearing earliest for low-pitched sounds.

A less common variety of deafness is produced by a single 'deafening' explosion of a big gun. If the noise be violent enough, a single impact of this sort may produce deafness. This deafness may sometimes be permanent, as when the drum or membrane of the ear is ruptured by the force of the explosion. To obviate this, many gunners, when firing, open their mouths in a semi-yawn, so as to equalise the pressure on either side of the drum-membrane, thereby lessening its liability to rupture. Naval gun-fire is more liable to induce noise-deafness than in the case of land artillery. This is probably because on board ship the sound-waves are conveyed not only through the membranes of the ears, but are also, in addition, conducted through the bones of the body and skull from the metal and wood-work of the gun-turret and ship's deck. In most of the aforementioned varieties of noise-deafness, the worker may protect himself, to a considerable extent, during times of exposure to excessive noise, by wearing wax



Portable apparatus for the physical measurement of noise by condenser microphone and valve amplifier

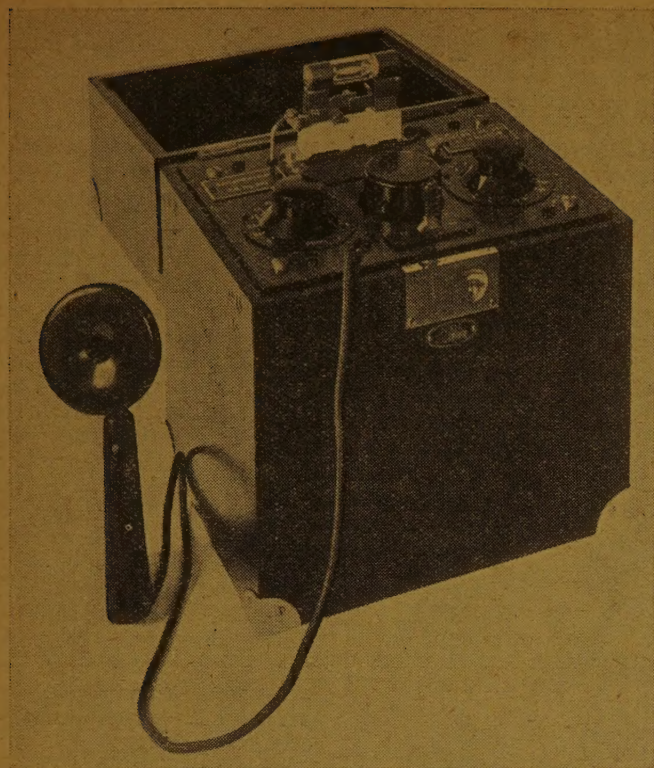
By courtesy of The National Physical Laboratory

plugs in his ears, so as to damp down the waves of intense noise.

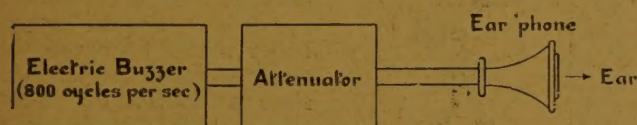
The industrial noises to which we have referred, bad as they are in their effects, may be regarded as more or less inevitable in the course of certain occupations.

Preventible Noises

But there is another class of noises, viz., the superfluous or needless noises, which exercise a widespread baneful



Aural matching or masking of a buzzer note.



Portable audiometer for the aural measurement of noise (Siemens-Barkhausen apparatus)

Noise to be measured → Other ear

By courtesy of The National Physical Laboratory

effect on many members of the community, especially in town-dwellers. Needless noises are those to which the Anti-Noise League is now trying to attract the attention of the citizens at large, and through them the attention of the public authorities who, up to the present, are singularly deaf in this respect.

What constitutes an unnecessary noise? According to the evidence submitted to the Minister of Health in 1928 by the British Medical Association, any noise which with ordinary care is preventable, any noise which is made at times of the day or night when it is most liable to be disturbing, may be considered to be unnecessary. Furthermore, noises which are loud, screeching, strident, or discordant, also noises which are discontinuous and non-rhythmic, are unnecessary and should fall within the category of public nuisances. Needless noises of this sort can easily be checked if official attention be directed to them, if they are placed on the list of punishable offences, and if the police are suitably instructed to deal with them.

A certain amount has already been done for the alleviation of street noises by the introduction of smooth wood, cement, asphalt, or rubber road-surfaces, to replace the old-fashioned rounded stone cobbles or rectangular stone setts. Rubber tyres for the wheels of vehicles, instead of iron tyres, are appreciably less noisy. Electrically driven machinery is, on the whole, less noisy than steam-driven machinery; the turbine boiler causes less noise than the older locomotive or tube boiler. For these mercies, such as they are, let us be truly thankful. Much, however, remains to be done. The unpleasant din of many vehicles, whether on the road

or on the railway, is often due to bad workmanship or to carelessness in upkeep, whereby the various parts work loose and rattle.

Effects of Noise in Inducing or Aggravating Ill-Health

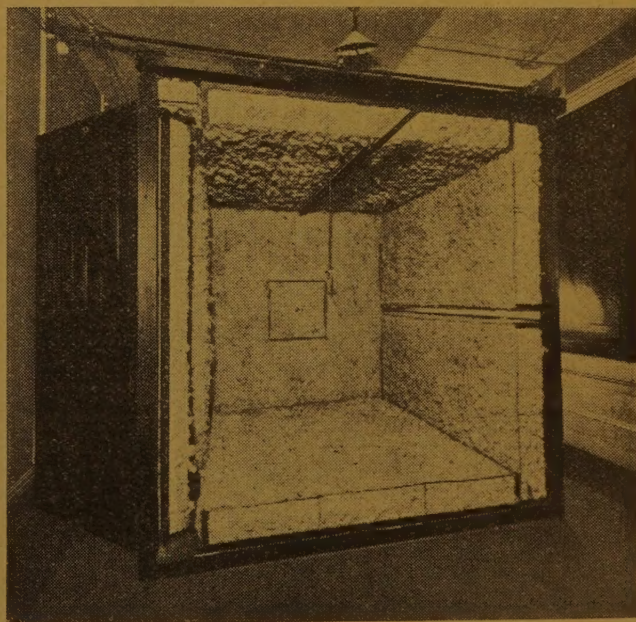
The ordinary citizen, in order to maintain his health and efficiency, requires a regular and adequate daily ration of rest and recuperation from his day's work. Sleep is as essential as food. Particularly is this true for the brain-worker engaged in complex calculations or in an occupation demanding close and continuous concentration.

For the invalid, or for the convalescent patient getting over an illness, the chances of recovery are often largely dependent on the facilities for continuous sleep. Loud, discordant, intermittent noises, especially at night, not only add to the suffering of invalids and convalescents; they are a serious obstacle to recovery, and, in a critical case, may decide the issue between life and death.

Periodic rest, which can only be achieved by sleep, is vital for the adequate combatting of the strains of modern life. Every experienced physician recognises that long-continued insomnia, from whatever cause, tends to produce physical and mental breakdown. Many cases of neurosis, functional nervous disorder, or so-called 'nerves' are aggravated by the effects of noise, which, as we have already indicated, is one of the primary fear-producing stimuli, thereby rendering the neurotic individual less capable of coping adequately with his anxiety-neurosis. And also in many organic diseases of other organs than the brain the securing or the failure to secure sleep may turn the scale one way or the other.

Needless nocturnal noises are even less excusable than those in the daytime and should be still more strictly forbidden. Who of us has not been awakened from slumber by the noisy hoot of motor-horns at the hands of motorists who are allowed to think that excessive noise is a substitute for careful driving?

Already in some continental cities hooting by motor-horns is forbidden between the hours of 11 p.m. and 7 a.m. The result is that, since the enforcement of this regulation, the number of motor accidents has actually



Lagged room at the National Physical Laboratory for absolute measurements on sound intensity

diminished, whilst the benefit to the sleeping population is incalculable. What has proved feasible in Paris, Brussels, Stockholm, and Helsingfors ought not to be impossible in London and other cities in England. The slogan of our League is, 'No Needless Noise!'

II—Noise as a Public Nuisance

By FRANK ELLIOTT, C.B.

Mr. Elliott, who was for many years Assistant Commissioner in the Metropolitan Police, explains what the law can and cannot do to keep down the abuse of noise, and points out certain specific reforms which public opinion should demand

WHEN some public reform has been carried out, subsequent generations often are astonished by two facts: firstly, that the reform has been so long delayed by obstruction and hostility, not only of vested interests but also of honest and reasonable folk, and, secondly, that the abuse in question was ever allowed to attain the dimensions it did. Consider, for instance, the history of slavery, and the system under which boys and girls of nursery age were exploited to work long hours of exhausting labour in factories and mines. The cup of protest is filled up drop by drop, until at last it overflows and reform sweeps up the mess.

The nuisance of noise is far older than the organised campaign to suppress it. I remember when there was a conference on the subject at the Local Government Board shortly after the Campbell-Bannerman Government came into office. The Home Secretary (Mr. Herbert Gladstone) sent for me and said he wanted me to attend the conference as his representative. 'Remember', he said, 'to preserve a sense of proportion'. When he was young and came to stop in London with his father, the Prime Minister, the traffic noise was infinitely worse than in the early years of the twentieth century. Such was the din from the cobbled streets and the iron-clad wheels and hooves that it was impossible to attempt conversation out of doors in London. 'Traffic noise', he said, 'then and now was as the thunder of Lodore to the burbling of Bandusia'. The change to better forms of paving, and rubber tyres for private and hackney carriages, created a vast improvement long before the pneumatic tyre was invented. To show how little the forms of modern paving enter into the noise question, take the case of Whitehall when the Cenotaph was erected. In order to establish an appropriate zone of quiet in its neighbourhood, rubber paving was put down at great expense. Within twenty-four hours this pavement began to shift, and the work of repair became a kind of permanent job, so that at last in despair it was given up and wood paving was substituted.

But what gave rise
To no little surprise
Nobody seem'd one penny the worse!

The traffic noise did not come from the tyres on the road but from the engine, transmission and exhaust of motor vehicles.

Signs that dead and gone Londoners resented unnecessary noise remain in old Metropolitan Police Acts, still in force. No one may use any noisy instrument to call persons together, to announce any entertainment, or for selling goods or obtaining alms. The High Court held that this covered the use of a drum to gather a Salvation Army congregation. Less effective was the attempt to curb street musicians. This

requires a householder, first, to give the musicians some sufficient reason (such as illness) for asking them to move on; secondly, if they refuse, to give them in charge himself; thirdly, to go with them and the constable to the police station; and, lastly, to enter into a recognisance to prosecute. Small wonder that the aggrieved householder follows the line of least resistance and submits to blackmail by paying the offenders to move elsewhere. Recent correspondence in the Press from dwellers in 'Pill Island' (the cabbies' old name for

all the Harley Street and nursing-home region) shows how rife the nuisance is at the present day. Obviously, to prohibit street music will deprive some people of employment, and others (and there is no doubt that such exist) of the pleasure of the band and the hurdy-gurdy. But we must accept as an axiom that every single reform injuriously affects somebody.

The whistling for cabs was one form of torture from which we are now free. When the code was one whistle for a growler, two for a hansom, and three for a motor-cab, the Police sent a *communiqué* to the Press recommending that, since the demand for motor-cabs exceeded that for horse-cabs, the single whistle should mean 'taxi.' This reform appealed to the public and was immediately adopted. But, as motor-cabs grew in number, the nuisance of the whistle increased. An opportunity was seized during the War by the much-maligned 'Dora' to abolish whistling for cabs throughout the administrative County of London, in the interest of the many wounded in hospitals and nursing homes. In 1916, the prohibition operated between 10 p.m. and 7 a.m. This was not enough, and exactly a year later it was extended to cover the twenty-four hours. The regulation in its latter form met with such approval that in 1920 it was perpetuated in a bye-law. Clearly it is more convenient for me on a rainy

night to stand in the shelter of the doorway and emit shrill blasts from a whistle than to go out in the wet and search for a disengaged cab, or to telephone to a rank (with some feeling of doubt whether a cab will come, and a certain knowledge that it will cost me more, because the meter will begin working when the cab leaves the rank, perhaps a mile away). But it is equally obvious that my convenience should yield to the public good. I predicted at the time, and experience has shown that I was right, that the reform would bring one trouble in its train, the increase of crawling cabs, which is now a direct cause of traffic congestion and must lead to traffic accidents.

As regards noise from motor-cars, there is no doubt that they resemble Corney Grain's choir-boy in that their 'voice is heard above the rest'. One can go on to agree that it is 'highly inartistic' but the public certainly do not 'like it best'.

A recent article in *The Times* pointed out that, so far as it is



The noise nuisance in the nineteenth century, as Cruikshank pictured it—

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As regards noise from motor-cars, there is no doubt that they resemble Corney Grain's choir-boy in that their 'voice is heard above the rest'. One can go on to agree that it is 'highly inartistic' but the public certainly do not 'like it best'.

A recent article in *The Times* pointed out that, so far as it is

controlled by law, motor noise falls under the two heads of fact and opinion. The noise arising from ramshackle vehicles and badly packed loads is fairly easy to deal with because it is more a question of fact. That emanating from inadequate silencers is affected by the word 'reasonable', beloved by draftsmen but loathed by police. To prove a silencer offence is a difficult matter, unless there is no silencer at all or a cut-out is found open. As a consequence, a large number of cars go scot-free, although flagrantly infringing the law; and it must be remembered that in a town the offence is enhanced by rows of houses on both sides acting as sounding-boards. Like the writer in *The Times*, I believe that if the R.A.C., the A.A. and the Society of Motor Manufacturers and Traders set their face against the fitting of a cut-out and the use of inadequate silencers the evil would die a natural death. Until this happens, I would go a step further and make the manufacturer (or repairer) liable if he cannot disprove that the car or cycle turned out by him, and not tampered with subsequently or deteriorated by age, has in fact a noisy exhaust. At present, a magistrate may ask for a driving demonstration of the vehicle which is alleged to offend. What happens? A 'sympathetic' expert is produced who can drive the car with half-throttle and gentle acceleration, under which the car roars no louder than a sucking dove. The prosecution ought to be allowed to produce a driver who will abuse the car as in fact the young spark who owns it does abuse it, and if the exhaust is noisy the onus of proof should rest on the maker (or repairer) that he has taken all possible steps to render the vehicle quiet before it left his hands. A certain class of owner likes a car which is noisy. And let it be remembered that this noise as heard by the driver is only some ten per cent. of what is heard by the man on the footway or in an adjacent house with window open. If the manufacturer goes on humouring this depraved taste, let him take the risk of a heavy penalty from the outraged law which will finally make it not worth his while to insult the ears of a long-suffering public.

Noisy animals are dealt with by a bye-law which has been adopted for all local authorities in the Metropolitan Area.

The substitution of the trolley-bus for the tram-car will abolish a distressing source of noise. This noise is worst where the lines curve and the wheel-flanges scream in making the turn. Flatted tram wheels make a horrible noise which should promptly be checked by a vigilant tramway authority.

More than two years ago I attended a demonstration of pneumatic road-drills fitted with silencers. The comparatively small amount of noise emitted was remarkable, and I wonder why such silencers have not been made compulsory. Most Londoners will agree that the ordinary road-drill is the worst source of all street noises.

A Government may naturally hesitate to check the use of the motor-horn, fearing that this will lead to more accidents.

But competent observers abroad deny the increase of danger, and we ought at any rate to give the system a trial. Persons living near road intersections, who formerly suffered much from motor-horns, acknowledge with gratitude the relief which the installation of traffic lights has granted to them.

Much suffering is caused by the racing of motor-engines, especially in the small hours, to 'warm up'. There is a regulation which prohibits this, but the abuse is widespread and difficult to control. With this I rank the slamming of the doors of motor-cars, and surely it is not too much to look to the manufacturers to invent some cure.

To sum up:

(1) The noise nuisance can be very considerably reduced, to the advantage of the great majority, but not without opposition or even without inflicting hardship on a minority and giving rise to trouble of another sort.

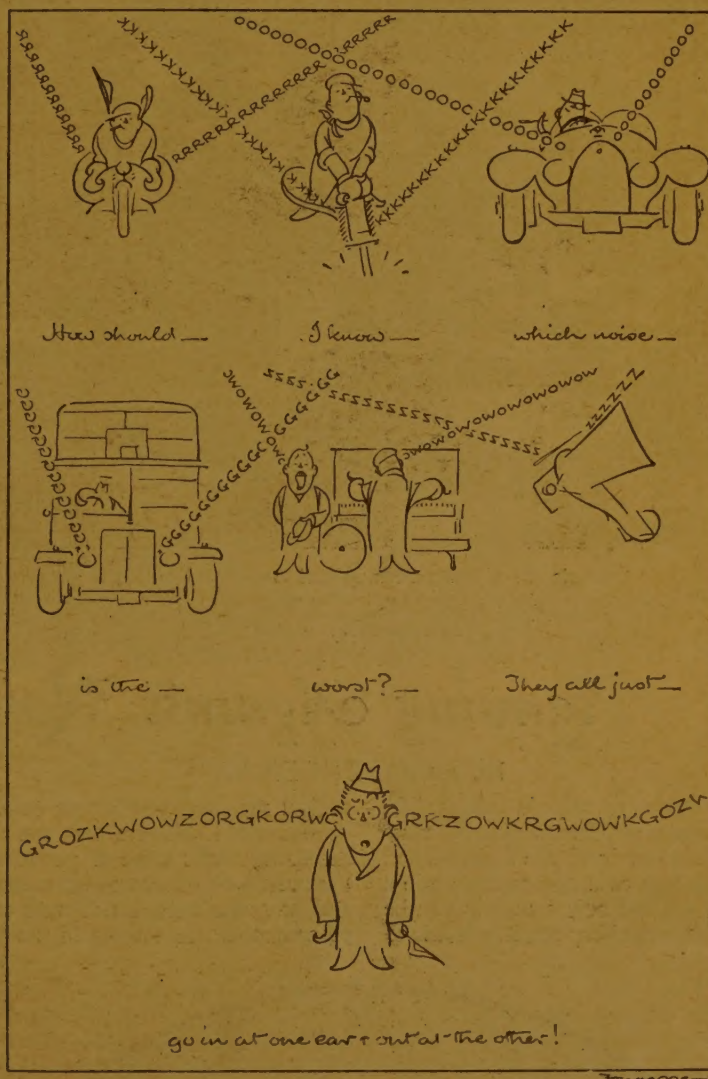
(2) One of the worst sources of noise, the improperly silenced car, is the most difficult to deal with. Unless and until recording instruments are invented which measure the volume of noise as it offends the ear and which are so accurate that they can be accepted as evidence in a Court of Law, the onus of proof must be shifted from the prosecution to the defence (a procedure abhorred by the doctrine), so far as manufacturers and repairers are concerned.

(3) Street music and street cries and similar minor abuses can be abolished to the detriment of very few and to the relief of the sick and those who are compelled to take their sleep during the daytime.

(4) The transmission and loads of all vehicles can be made quiet.

(5) If an embargo on the use of motor-horns during certain hours can work in Continental cities *a fortiori* it can work in English towns, since the Englishman is essentially a supporter of law and order.

(6) It is of prime importance that the police should have the backing of the public. The public have



—and in the twentieth, according to Fougasse

learnt the value of peace and quiet by day, but especially by night.

Weary they turn from the scroll and crown,
Fetter and prayer and plough—
They that go up to the Merciful Town,
For her gates are closing now.
It is their right in the Baths of Night
Body and soul to steep:
But we—pity us! ah, pity us!
We wakeful; oh, pity us!—
We must go back with Policeman Day—
Back from the City of Sleep!*

It is not P.C. Day, nor any police officer in all the Forces in the Kingdom, who would grudge the wakeful their right, but the selfish or the thoughtless, who can be far better controlled by organised public opinion than only by spasmodic or intermittent use of summons and fine.

*Quotation by permission of Mr. Rudyard Kipling



Example of a felt absorbent applied to a curved ceiling

In this office the noise of typewriters in the left-hand portion of the office was focussed by the ceiling down into the manager's offices on the right beyond the screens and glass doors. This focussing action is illustrated in the annexed diagram. The application of the felt prevented the focussing of the reflection, and also reduced the general level of loudness in the room

III—Planning Against Noise

By HOPE BAGENAL

IN weighing the real hardship due to noise in modern life, the variations in the sensitiveness of different persons must be considered. Some people intensely dislike high-pitched noises such as the brush scream of a generating station; others suffer specially from low-pitched noises such as can be caused by the vibrational response of a cheap modern house to door bangs, equipment noises, or heavy traffic; others do not hear the loud traffic filling their office, but cannot endure a piano or loudspeaker at home. Of all noises the mechanical intermittent, which has no regular beat, and cannot therefore be familiarised, causes the greatest hardship, and for this reason the tuning up of petrol engines in a garage, or an old gas engine with a broken exhaust box, are the kind of noises able to drive a neighbourhood to desperation. Some persons are apparently unconscious of noise though probably not immune from nerve strain on that account. Others, again, are highly sensitive but unaware of the fact. Thus one finds lecturers and teachers working in

typical modern class rooms having highly reverberant conditions often unaware that their nervous strain is due to an intruding traffic noise of perhaps fifty decibels reinforced by the room—in other words, unaware that they have to instruct and keep the attention of their class above a noise equivalent to someone else talking in the room. Therefore, in assessing

the degree of nuisance the subjective element must be borne in mind. There is no doubt that persons who do suffer from noise suffer today severely. Many modern tendencies have combined to cause this. Street traffic and mechanical music are only contributory factors. There is the use of the very hard modern plasters which, combined with the fashion for no carpets and slender furniture, tends to give 'bathroom conditions' even in living rooms and to magnify sound at its source by box resonance. There is the piercing of floors and walls by the numerous service pipes, ducts, and wires. There is the great increase in cheap electrical equipment and, above all, there is the tendency towards cheap non-

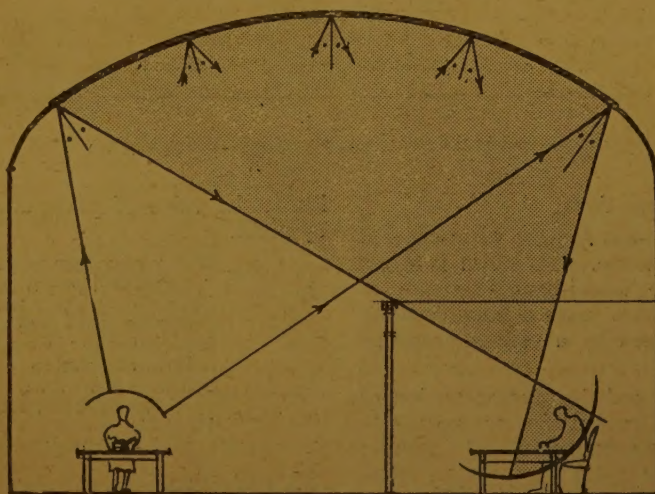


Diagram to illustrate the photograph above

The curved ceiling, before it was acoustically treated, focussed sound from typewriters on the left down upon managers and secretaries on the right. So complete was the focussing that dictation in a low voice could be distinctly heard on the other side of the screen

massive building structure. It is roughly true that our buildings defend us from noise in proportion to their massiveness, and that thin, modern drum-like floors, walls, and partitions, when loaded and stressed, tend to transmit sound. But this movement towards thinness is due to powerful economic causes, and we must realise that noise is largely the result of cheapness. The safety of the public as to strength of structures is carefully guarded, but the natural sound insulation due to mass is sacrificed. This applies also to electrical equipment. New labour-saving equipment generally has its electric motor. The tendency is for contractors in the stress of competition to accept from machine designers cheaper and ever cheaper machinery and accessories. It is true that precautions can be taken in thin structures, but to be of value they must cost a certain amount of money, and for that reason are liable to be dispensed with. If in response to the coming housing campaign cheap flats and workmen's dwellings are to be built for 10d. a foot cube or less, sound insulation and much else will have to be cut out.

These considerations, however, suggest their own remedies. First there must be recognition of the value of quiet sites for residential property.

An intelligent anti-noise campaign ought to concentrate first on residential buildings, upon the home of the city worker, where rest and the repair of nervous tissue is urgently required, and where indeed, owing to noise, the contemplative basis of our civilised life is threatened. This urgent class must include workmen's dwellings, cheap houses, and flats of all kinds. Next in importance come hospitals, schools and hotels. Quiet property should not only be scheduled, but should be defended for its proper purpose. Regard should be paid to the future development of bus routes and stopping places. Road traffic on a hill (as in Winchester High Street) is specially noisy owing to gears. New residential property ought to be planned in blocks not opposite each other so as to avoid opposite sound reflections, which largely contribute to the loudness of traffic noise. Secondly, the cost of sound insulation must be faced, but here also some classification is possible. There should certainly be a standard minimum of protection from noise for the public for all residential buildings, and party-walls and floors between flats ought not to fall below it. In Budapest the bye-laws provide for a minimum sound insulation by party-walls equivalent to a thickness of 6 in. of masonry. A better standard would be a minimum of 9 in. or its equivalent. Also we should insist that even in the cheapest workmen's dwellings one room in every flat, namely, the living room, have a sound-proof floor, either of the 'floating floor' or 'cushion floor' kind. Calculations show that a good floor of the 'floating' type could be laid in the living room of each flat (say 12 ft. by 15 ft.) in a block of a hundred workmen's flats for an addition to the rent of each flat of approximately a penny per week, and the additional prime cost for the whole block would be approximately 1/12th of a penny per ft. cube. These figures are over and above the ordinary floor boards and fillets generally specified upon the structural floor. For better-class flats, say a block of a hundred on five floors, the additional building cost for four rooms (say a total area of 700 sq. ft.) would amount to about one-third of a penny per ft. cube; or, capitalised, would mean very roughly an extra on the rent of each flat of only 13s.

a year. This would be willingly paid by some people for the sake of peace.

The importance of the floor is that it transmits impact sounds such as footsteps and also pianos; moreover, it transmits directly and also by exciting the partitions that rest upon it. It must be remembered that the modern grand piano, designed to be heard in the Albert Hall against an orchestra of a hundred instruments, is a very loud instrument indeed; modern private-enterprise commercial structure is no defence against it. In a recent rough test of floors in flats it was found that a threepenny bit dropped through a quarter of an inch on to the floor could be distinctly heard in the flat below. But blocks of flats might be classified: some might be built and let at extra rent for peace-loving tenants. In these blocks, in addition to sound-proof floors and party walls, there could be some restriction as to hours for radio music. Loudspeakers, also tend to grow louder. And in summer when flat windows are open sound enters from interior courts from several neighbouring loudspeakers. This danger occurs in its acute form when the court is enclosed on four sides and lined with glazed bricks: open courts are in themselves less noisy but may admit traffic noises.

Next in importance is that our Building Research authorities inform us which of the commercial structures (on which economic building depends) are the more or the less sound insulating, and if any modification would improve them. We are without experimental information as to floors and have to rely on observation in actual buildings. Therefore tests on type floors having a thickness roughly one-twenty-fifth of the span (and it is this small thickness ratio that gives the drum action tending to transmit noise) are badly needed. Also with such tests should go others on



Testing energy expenditure

The effect of noise on energy expenditure is determined by analysis of the air exhaled under quiet and noisy conditions. The mask, with separate inlet and outlet valves, fits over the mouth and nose. The air of the room is inhaled, and the exhaled air, having passed through a short tube, can be collected and analysed. An operator quickly becomes accustomed to the mask; for nine months each of three subjects slept with a similar mask strapped to his face. Of special interest are—the wall of Acousti-celotex in the background; the calculograph for recording time; and the electrical connections to the noiseless typewriter for measuring output. The typist maintained a speed of 150 words per minute.

By courtesy of the National Institute of Industrial Psychology

the various anti-impact floors, and analysis of these should include, of course, questions of durability and hygiene. Finally, we need the focusing of public opinion on the silencing of machinery indoors as well as out. Noisy machines are bad machines. At the root of the problem again lies the fact that the cheaper types of electric current tend to cause noise in rotating machines, and, for economic reasons, supply companies all over the country are adopting the cheaper types. As a result, no one is now safe from the noise of his neighbour's new knife cleaner, refrigerator, vacuum cleaner, ventilating fan, rotary pump. The single phase alternating current is specially noisy and to be guarded against. But much can be done by intelligent machine design with a clear end in view, namely, the silencing and simplifying of running parts. Also it is possible by planning lifts away from party-walls, by silent lift gates and lift motors, by insulating machinery in the basement and keeping it away from the stanchions supporting the super-structure, by standing dustbins on rubber pavings and not on hard concrete, by putting sound-absorbing ceilings on the window side of rooms exposed to traffic, and by other commonsense precautions, to reduce materially the ordinary everyday barrage. The public must express its demand for less irritating living conditions. And in their turn architects and engineers ought to protest against a false economy in regard to noise insulation exactly as they would protest against any cutting of prices that jeopardised the safety of structures.

IV—Noise—its Measurement and Mitigation

By G. W. C. KAYE

Superintendent of the Physics Department of the National Physical Laboratory

MR. A. P. HERBERT has recently remarked that 'nearly all the material things which distinguish this age from the last are things which make or communicate more noise than there was before'. No doubt this is substantially correct, though, if we may judge from contemporary literature, the noise of towns was, as far back as Elizabethan days, the subject of disapproving comment. A hundred years ago the congregation of a City church complained that the noise of the stage coaches drowned the voice of the preacher. Many of us can well remember how very noisy steel tyres and horse shoes on cobbles or sets were in pre-motor-car days. Noise, like the poor, has in fact always been with us, but from a scientific and technical point of view the subject is only young. First of all we had better be clear what we mean by noise. A Committee of the British Standards Institution is at present engaged in framing a definition, but most of us, when asked the question, will fall back on an illustration—noise is very loud sound, such as that of a pneumatic road-drill, or it is high-pitched like the shriek of a whistle, or persistent like the scream of a circular saw, or unexpected like the back-fire of a passing car, and so on. We have the added complication that reaction to noise is largely temperamental and may be appreciably influenced by environment or force of association. Noise is admittedly a subjective phenomenon and if we content ourselves by defining it as 'sound which is undesired by the recipient', we shall conform not only to common usage, but to technical requirements such as those of the telephone engineer.

It will be appreciated that the measurement of noise is not a wholly straightforward matter; and in fact general agreement as to standardisation of instruments and technique has yet to come. An everyday test of the loudness of a noise which we are prone to apply, is whether or not we can hear one another speak. But for scientific purposes we need to do more than this, though quite simple means have afforded a good deal of information in a number of problems, particularly with very loud noises.

First of all we must find a measuring unit which will cater conveniently for the enormous range of energy—over a million millionfold—which represents the difference between the softest and loudest sounds the human ear can detect. We may do this by trying to keep in step, however roughly, with the working of the ear, and adopting the decibel scale which advances by 'geometrically progressive' increments of approximately 25 per cent. in energy. Moreover, a unit decibel so defined corresponds roughly to the smallest change of loudness which the ear can detect under average conditions, and so we divide the complete range of auditory loudness into 120 or 130 decibels, the zero figure being based on a threshold intensity the exact specification of which has not yet been agreed on. As shown in the diagram on page 46, a pneumatic road-drill on this scale is about 90, a noisy motor horn about 80 and conversation about 50 decibels. In this connection it should be recalled how small the amount of energy is in most sounds of everyday experience. For example, the rate of energy emitted in speech varies between 10 microwatts for conversational speech and 100 microwatts for an orator trying to make himself heard in a large hall. We can perhaps get a notion of the minuteness of this energy if we picture to ourselves the entire population of Greater London

shouting simultaneously at the top of its voice. The power produced would only amount to one horse-power.

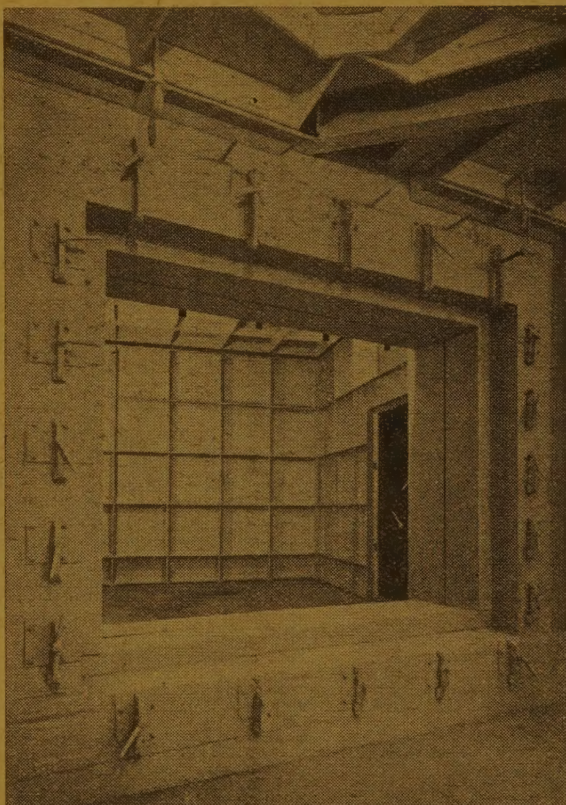
Despite the small quantities of energy involved, the physics of acoustical measurement has made great strides in recent years, thanks largely to the improvement in the microphone and the amplification and rectification of microphonic currents which the thermionic valve has made possible. Direct-reading portable noise meters on this principle are now available, by means of which the loudness of noises can be measured in decibels. One such outfit designed and constructed at the National Physical Laboratory is shown on page 46. As the ear is the final arbiter of loudness, and as a physical instrument such as a condenser microphone takes no account of the behaviour of the ear in giving

preferential sensitivity to medium-pitch tones and muting the high and low tones, a special electrical network is added to the outfit to simulate this effect. The apparatus will also analyse complex noises into their component tones and demonstrate the wave forms of noises. Alternatively we can measure noises in decibels by means of one of the portable audiometers now commercially available. Look at the photograph of one on page 47. The basis of these is the matching by the ear of the noise to be measured against a standard note of adjustable loudness produced in a telephone earpiece by means of a small electric buzzer or a valve-oscillator. Such instruments require to be calibrated against absolute standard instruments, the arrangements for which are shown in the room illustrated on page 47. Some experience is necessary in the use of audiometers and they are not well adapted for the measurement of noises of short duration.

During the last few years loudness levels of many types of noise have been determined by the National Physical Laboratory on the road, on the rail, on the sea and in the air. Measurements on motor-horn noises have been carried out for the Ministry of Transport and their strident characteristics studied. Associated work has also

been conducted by the Laboratory on the mitigation of noise, for example, in aeroplanes, trains and buses. For many years the noise was the chief deterrent to aircraft travel, but in the newest air liners the noise has been reduced to no more than that in a train. The whole question of protection from noise is being systematically investigated at the Laboratory. New acoustic testing laboratories of unique design have just been completed. On this page you see one of the new chambers where the sound-proofing qualities of walls, partitions and floors are tested. The present trend of building materials and structures is ever towards lightness and thinness, both prejudicial to acoustic isolation. Double or composite floors and partitions of designs approved by experiment are being developed to give the public the greater defence which it is demanding against the nuisance of noise.

In general the best way of securing protection from noise is to quieten it at its source, failing which, to isolate or screen it by some means. A measure of relief against too high a noise level in a room can sometimes be obtained by increasing the amount of carpets, upholstery, curtains, etc. If such things are not over-welcome in the sparsely furnished room of 1934, we can recapture the acoustic repose of the Victorian drawing room by applying to the ceiling or walls one of the inconspicuous acoustic absorbents now commercially available.



New acoustical laboratories at the National Physical Laboratory for testing the sound-proofing qualities of walls and partitions

V—Noise Reduction in Tube Railways

A statement from the London Passenger Transport Board on what is being done to reduce noise on the Underground Railways

THE Underground Railways, now incorporated in the London Passenger Transport Board, have for many years appreciated the need of reducing the noise of trains in the tube railways.

The problem of noise reduction involves three factors: keeping the production to a minimum, absorbing some of the inevitable noise, and preventing as far as possible entry of noise into the cars. The noise arises from various sources associated with the equipment of the cars and the track, and a considerable amount of the noise arises from the passage of the wheel over the rail even when the surface of the tyre and rail are very smooth. Various forms of track have been used, including sleepers supported in the middle with the ends overhanging, sleepers completely embedded in concrete so as to get a foundation as solid and firm as possible, and also sleepers held only at the ends, the middle being unsupported. None of the forms of track tested gave sufficient reduction to lead to the view that the problem could be solved by changes of construction. It was found, however, that when certain kinds of ballast were laid across the track surface up to within about 1½ inches of the top of the rail a considerable reduction of the noise was affected; this method, however, could not be generally adopted owing to the difficulty in inspecting properly the permanent way under such conditions. The track construction on the latest extension includes ballast of a considerable depth, but brought only to about the level of the top of the sleeper. On the older lines the rail lengths are 26 feet and 42 feet, but on the new extension the rails are 90 feet long, which has made a considerable reduction of joint noise.

The success of absorption on the track led to the trial of various absorbent materials placed on the sides of the tunnels from a little above the rail to about the height of the top of the car windows. The cast iron tunnel lining provides a convenient arrangement for applying the material, as it can be placed between the flanges connecting the segments. The earliest absorption tests consisted of mattresses of sea grass about 4 inches thick enclosed in small-mesh chicken wire and laid continuously to form a band 6 feet wide along each side of the tunnel. It was known that the material could not be regarded as suitable for permanent retention, but its absorption efficiency is high and the result showed very definitely that reduction of noise could be obtained by this means. A large number of materials were considered and several were tested; some were very effective and one was at least equal in result to the ballasted track, but it was difficult to find a suitable material; the most desirable ones, from the noise-absorption point of view, were not absolutely fire-proof or were liable to disintegrate in the strong draughts of the tube tunnels, or to attract and hold dirt and dust, or had other inconvenient properties. One type of mattress, constructed of a loose-textured asbestos felt about one inch thick and faced for protection with woven asbestos fabric, had very good noise-absorption properties and met in large part the other requirements; however, a more practical form of application and improvement in details is necessary before such method could be adopted. As a development of this application, asbestos was experimentally sprayed to a thickness of about half an inch on to the tunnel lining over a mile length of tunnel, a special binder being employed, and a surface finish not difficult to clean was obtained. The absorption, however, was not equal to the result of the initial experiment with loose mattresses.

Another attempt at noise reduction was based on insulation of the track from the concrete foundations and tunnel structure, one method employed being the installation of special rubber pads between the sleepers and the concrete road bed. The pads were of two types, one being solid and the other having oblique slots at intervals to facilitate movement in the rubber; a lead wrapping was used to give increased damping of the vibrations and also afford protection to the rubber. The effect of pads of various materials between the rail-chair and the sleeper was also tested with the same end in view. These experiments did not bring about the desired result, indicating that the noise was directly air-borne and not mainly transmitted through the road bed and tunnel lining. Other experiments consisted of reflectors which it was hoped would throw the noise downwards and prevent it rising to the level of the windows and ventilators; this method was unsuccessful. A modified arrangement was then installed whereby the clearance between the car and the side of the tunnel at about the level of the footboard was reduced to a

minimum; the necessary clearance allowed the noise to rise in practically undiminished volume.

Extensive experiments have been carried out in connection with the rolling stock, and the later models are undoubtedly much quieter; the improvement effected, however, has been to some extent lost by increased train speed, as the noise production appears to follow something like a square law in relation to the speed. Early experiments consisted of covering the interior surfaces of a car with cotton wool during special test investigations. The wool was removed in sections so that the effect of exposing the floor, side panels, windows, roof and ends could be noted and it was found that the ventilator openings and windows were the main path for entry of the noise. In this connection an interesting experiment consisted of fitting a shroud round the bogies close to the wheels and the rail, with the object of shutting in the noise by a form of skirt. This arrangement was to some



Interior of Tube railway, showing positions of noise absorption pads

By courtesy of the London Passenger Transport Board

extent effective, but led to difficulties in inspection and maintenance of the rolling stock, so that, like the layer of ballast on the track, it did not offer a means suitable for adoption. The rolling stock improvements evolved from the investigations included sound insulation in the floor, sound deadening in the side panels and roof, the use of a form of scoop for ventilation at high level in place of opening the side windows, arrangements for reducing noise from brake gear, couplings and other attachments, thicker glass in the windows, the size of the panes being kept to reasonable dimensions, and other changes which influenced noise reduction, for instance the use of moquette in place of cane seating. The motor noises, and in particular the gear noises, have been very greatly reduced in the new equipment. It is known that the indirect ventilation of the cars through noise-absorbing passages reduces the sound entry very considerably, but difficulty arises in its adoption as, although effective ventilation may be provided, the public still wish to see open windows for air entry, and unfortunately these also result in noise entry.

In moving cars, measurement of noise which varies continually presents difficulty, but sound-measuring instruments affording better measure and analysis of the noise in the cars are now available. A considerable amount of data has been obtained of the comparative noise on different types of track and in various types of car, including the effect of absorbent materials applied to the tunnel lining. It is interesting to note that measurements of the intensity of noise in cars in the open air where the noise is not unduly noticeable, as compared with the tube tunnels where complaints of noise arise, shows only a small difference in the readings in decibels, indicating that the human ear is quite naturally very sensitive to the reduction of sound or noises around frequencies of the human voice. The present experiments are concentrated on determining the origin of the noises with speech frequencies, say 300 to 600 c.p.s., so that attention may be concentrated on their elimination or reduction; the reduction of noise of these frequencies would achieve the desired object. Investigations are still proceeding.

The Noise of Aeroplanes

THE NOISE DISTURBANCE arising from flying has to be considered from two points of view, namely, from that of persons travelling by air and that of persons on the ground. For the sake of each it is important to reduce the noise at its source, but other aspects, also, are important for the traveller by air which do not help matters so far as the sufferer on the ground is concerned.

The main sources of noise, which are of roughly equal importance, are the airscrew and the engine, and it is very little use to reduce one without at the same time reducing the other in proportion. For passengers it has been found that the placing of the engines and airscrews in relation to the cabins and wings, and the sound-proofing of the cabin walls in air liners, is of the highest importance. A Report published by H. M. Stationery Office (Report and Memorandum 1542) presents material in a form intended to be suitable for the use of aircraft designers. It gives figures for the general level of noise in everyday situations and for the noise levels of airscrews, of exhausts and of engine clatter. Reference is also made to the insulating value of various types of cabin wall, and to the importance of locating the power plant in some favourable position. Results of noise measurements made in various types of commercial air liner are presented and analysed. As a result a tentative table is given from which it is possible to assess the order of loudness of the noise in the cabin of a machine, provided the situation of the engine, of the exhaust and of the airscrew are known, in addition to data concerning the tip speed of the airscrew and the structure of the cabin walls. The analysis proves to be in general agreement with the results of experiments which have been carried out on testing plant.

In connection with the reduction of noises at their source, investigations, both theoretical and experimental, have been made in order to identify the different sources and types of noise which are derived from an airscrew and from the exhaust pipes of an engine. As regards the airscrew, it has been found that the reduction of the tip speed of the blades is a matter of vital importance. As compared with tip speeds of 800 to 900 feet per second which were common until recently, an effort is now being made by the use of geared engines and alternative designs of airscrew to reduce tip speeds to the range 500 to 600 feet per second, within which the noise emitted is comparatively unobjectionable.

The reduction of noise from the engine exhaust comes down to the problem of designing a silencer of a weight and bulk which is not prohibitive in its effect on the performance or carrying capacity of the aeroplane; and which, at the same time, is of a material to withstand severe conditions of temperature and vibration. Furthermore, it is a matter of great difficulty so to design an effective silencer as not to increase materially the danger of fire in the event of a crash, owing to the high temperatures reached by its internal parts.

Experiments which aim at producing an adequate degree of exhaust silencing, combined with safety from fire and a minimum of weight and bulk in the silencer itself, are being actively pursued; but, while one may look forward to a fair degree of silence from the light aeroplane, it is hardly to be expected that the noise from the powerful engines of fighting machines and air liners can be more than partially mitigated.

Noise in the Factory

The National Institute of Industrial Psychology send us this note, based on their investigations

ONE OF THE FIRST THINGS on which almost any visitor to a factory comments on is the noise. But by the time he has finished his tour, he is already becoming used to the noise. This adaptation to a noisy environment takes place more rapidly and much more thoroughly than is often realised. So long as the noise is continuous and not too loud, we soon become as unconscious of it as we are of the feeling of clothes upon our bodies. A constant noise soon ceases to interfere with our work or our conversation: we become completely oblivious of it. Adaptation, indeed, is sometimes so complete that people accustomed to noisy surroundings are ill at ease in the quietness of the countryside.

So long as the noise forms a continuous and undifferentiated background, it has, in general, no very serious effects. But an intermittent irregular noise is a potent source of annoyance and irritation. An unexpected noise demands our attention—it is a momentary distraction from whatever we are doing. A series of such distractions has a distinctly bad psychological effect, producing bad temper and fatigue.

And even our normal adaptation to accustomed noise is apt to break down when we are fatigued or unwell. Then, sounds which would normally pass unnoticed jar upon us. Men doing heavy work in noisy factories, for example, not only become more conscious of the noise towards the end of the day, but they also become more resentful of it. A good deal of the

bad temper which is often common then can be traced to the failure of the workers' psychological adaptation to the noise. This failure of adaptation when we are fatigued raises the question of whether energy is required to maintain that adaptation in normal circumstances. The evidence on this point is far from complete, although experiments by Laird* showed that typists expended more energy in doing a certain task in noisy than in quiet surroundings. Should further research confirm this result, then we shall have a strong argument for the reduction of noise of all sorts. It is to be expected, of course, that people should differ widely in their attitude towards noise.

The Anti-Noise League

IN THE CLOSING DAYS of September last the Anti-Noise League sprang into existence. A letter to *The Times* signed by Viscount Buckmaster, Lord Horder, Lord Riddell and others called attention to the widespread suffering, inconvenience and damage caused by needless noise. The response of the public was immediate. The entire British press took up the subject and warmly supported the new movement. The League established its offices at 18 Old Cavendish Street, elected Lord Horder chairman of its Provisional Committee, and entered at once into a correspondence with the Home Office, Ministry of Transport, the clerks of London Boroughs and the Lord Mayors and heads of municipalities throughout the kingdom, pressing upon them the urgent necessity for a stricter enforcement of existing statutes and bylaws relating to noise.

The chief new measures the League advocated were: (1) the granting of a nocturnal silence ordinance resembling that which has proved successful in Paris, Brussels and other Continental cities, where all motor-hooting is forbidden between 11 p.m. and 6.30 a.m., and (2) the prescription of a standard bulb-horn to replace the ear-splitting electric hooters and other instruments of torture in common use. Questions were forthwith addressed to the Minister of Transport, who informed the House of Commons that he was considering the adoption of these measures, and so hopes are entertained that the long-deferred boon will eventually be granted.

In order to cope with the huge mass of specific complaints which reached headquarters, the League appointed Noise Inspectors, ex-members of the Metropolitan Police, whose reports upon conditions in London streets inspired the preparation of Noise Maps, the first of which dealt with the West End, showing the spots where motor-hooting was at its height. The inspectors' reports revealed in many ways the extent of the evil from which London (and all large towns) is suffering. Certain hospitals and nursing-homes are obliged to keep windows tightly closed which ought to be widely open; and during many hours of the night there is little or no sleep for the patients. Harley and Wimpole Streets, which should be quiet, are 'miniature motor-racing tracks'. In hundreds of streets houses are empty by the score, their former tenants having fled from the din of motor-cycles, sports cars, loud hooters and noisy gears. Besides, as Mr. A. G. Bradley reports to the League, 'there are ten thousand miles of roads outside the cities and towns through which all night vehicles pass with an uproar so terrific that sleep is in many cases utterly destroyed and almost always precarious'. Heavy traffic, the whole of which could be carried by railway or canal, has occasioned millions of pounds' worth of damage to house property along the roads.

A plebiscite of one thousand persons who complained of noise indicates that the worst offender of all is the motor-cyclist, travelling with an 'open exhaust'. According to law every motor-cycle must be fitted with an effective silencer. But although there is more than one effective silencer available, the trade finds its customers do not take kindly to them, even when they involve no loss of power. And hitherto magistrates have been lenient. But the League's determination to prosecute is working a change, and the Minister of Transport has warned the manufacturers that they must comply with the law.

Often, in the case of habitual offenders, remonstrance and warning is effective. One great dairy organisation has decided to introduce rubber silencers for its milk bottles and churns; another is to equip a thousand of its horse-drawn vans with rubber tyres. Inventors are coming forward with the most ingenious devices to deaden sound, even the sound of that strepitous monster, the pneumatic road-drill. A silencer for aeroplanes is being perfected. So it would seem, if only the great body of noise-victims will rally in their tens of thousands to the League†, that within a comparatively short time the major causes of offence will be eliminated in the towns and Parliament can proceed to regulate the conveyance of goods and merchandise, so that use may be made of our neglected canal system and the present steady juggernaut procession will no longer ruin the repose of the dwellers along our main roads.

BECKLES WILLSON, Lt.-Col.,
Hon. Sec. of the Anti-Noise League

*Reported in the *Journal of the National Institute of Industrial Psychology*. Vol. IV, pp. 251-8.
†The ordinary membership subscription is 2s. 6d.

Economics in a Changing World

By Commander STEPHEN KING-HALL

Shipping—the American Case

YOU MAY REMEMBER that a few weeks ago I gave you the British case—and a very strong case it is, especially in respect of tramp steamers—in support of the view that we were being subjected to most unfair competition. I told you something of the views put forward by the Chamber of Shipping and the facts mentioned by the Chairman of the P. and O. Company in his annual speech to his shareholders. Now I am going to give you an American point of view, and I have chosen the U.S.A. because it is in that country that the practice of subsidising shipping has been prevalent during the post-War years. The American Steamship Owners' Association of New York has issued a statement in reply to the recent pronouncements in Great Britain. It is very long, so I must content myself with giving you the main points made by the Americans. Imagine you are a British shipper; I'm an American shipper, and I'm going to put a series of tail-twisters to you:

(1) We Americans only carry a third of the freight originating in our borders. British ships carry as much of the American business as we do ourselves.

(2) There is talk in Great Britain of a policy of reserving ocean transport to the country of origin of the goods. Well—we shouldn't object. We originate more commerce than any other nation. Americans constitute 70 per cent. of all travellers on the North Atlantic. We pay 85 per cent. of all fares, and American citizens occupy 95 per cent. of all first-class cabins. Reserving trade and passenger transport to domestic flag-ships would give us the mightiest merchant fleet afloat.

(3) In the American cruising business, foreign lines have for years cut into established routes at the height of the tourist season.

(4) Your Government is on dangerous ground when it says, through the mouth of Mr. Runciman, 'We want to see British firms from every part of the Empire using only British ships'.

(5) Practically all nations today subsidise shipping in some form or other, despite the fact that they are already subsidised by lower operating costs. The British Mercantile Marine, as an instance, employs 43,000 Lascar seamen at wages ranging down to \$7 a month.

(6) Another foreign charge has to do with the alleged dumping of ship tonnage by the United States. This country has built 42 ships under the Merchant Marine Act. England has outbuilt us ten to one during the past decade. At this very moment Great Britain has on her slip-ways 300,000 tons of new building. The U.S.A. has exactly 14,654 tons. Our new construction is exactly 2 per cent. of the world's total today; the British figure accounts for 40 per cent.

Now, as an Englishman, I could reply effectively to some of those American points, especially the remark about 'subsidies by lower operating costs'. After all, the question of lower costs is at the root of all international trade, or domestic trade for that matter. If we are to look forward to a day when the grower of bananas in the Orkneys is to claim that the Jamaican planter is subsidised by lower costs, we can look forward to a world in which my broadcasting would be limited to making a brief statement from the entrance of my private cave to an audience clothed in rabbit skins. In short, the world as we know it would cease to exist if 'lower costs' are to be considered an evil in themselves. However, I am not going to reply to the American, because I gave our case some weeks ago.

Some Facts About China*

AND NOW FROM DISPUTING SHIPPING INTERESTS let us go to the Far East. I have been studying a report just issued by the Department of Overseas Trade, entitled *Trade and Economic Conditions in China, 1931-1933*.

If only people knew how interesting many of the reports are which can be obtained at H.M. Stationery Office, the circulating libraries would have to stock them. This report on China ought to be in every school in the country. From a study of its pages I have learnt much as to the changes which have been recently taking place in China, changes which have occurred since I spent two years in that part of the world a few years ago. I must summarise some of the facts in this report which are of special interest to us. Where possible I shall quote from the document.

Here are a few statistics in News Reel form:

Size of China: As big as Europe less Russia.

Population: More than 350 million, less than 500 million. I dare say we shall not be far wrong if we say that every fifth person in the world is Chinese.

Annual value of foreign trade: About £100 millions of imports; about £60 millions of exports. Even these absurdly small figures are five times as great as they were in 1900.

Note that though 20 per cent. of the world's population lives in China, her total foreign trade amounts to about 2 per cent. of the total trade of the world.

There are only 8,000 miles of railway, as yet, in China.

Great Britain obtains about 7 per cent. of China's trade and China obtains 1 per cent. of our total trade. China's most important customers are the U.S.A. and Japan. Great Britain comes third.

The strength of China should rest on her agriculture, yet in 1932 no less than 20 per cent. of her total imports consisted of wheat and rice.

These few facts will give you some sort of a picture, though very inadequate, of the economic state of China, but if we are to take long views of the Chinese situation—and what are ten years, or twenty years in the development of a civilisation which for centuries has successfully resisted disintegrating influences?—we should not pay too much attention to present-day statistics of Chinese imports and exports, but rather take note of what are the nation-wide forces and ideals now stirring in China.

The report I have quoted says:

There are unmistakable signs that the Government are sincere and determined in their plans for the pacification and economic reconstruction of the country. . . . The outstanding feature in the economy of China today is the desire, the definite plan, to become self-supplying in the everyday needs in manufactured goods. This intention is as strongly in evidence by private interests as by the Government.

The report then reaches the conclusion that the future of foreign trade with China must lie in the direction of supplying her with capital as opposed to consumable goods. By capital goods are meant such items as railway equipment; public utility equipment (electric light, power, gas, water); factory equipment; buses, trucks and motor-cars; aircraft; and river and coastal vessels.

These things involve long-term credits, and it is said that capital is shy of going to China because of the confused state of the country. I will not pretend that China is as safe as the Bank of England, but I am not sure that she is less reliable as a debtor than some European countries which are the repositories of a good many millions of pounds sterling. The report adds that 'a fundamental principle which must be adopted if a larger market in China is to be created for U.K. goods is that of co-operation with Chinese interest'—in other words, China is prepared to accept a very great measure of assistance from without, but she has determined as soon as possible to be mistress in her own house.

The Chinese are well aware of the value of the motor-car, and there has recently been a great development of road making; One day the purchasing power of this vast population will make its mark in the motor business. Suppose the Chinese became sufficiently prosperous to be able to afford one car per 100; that would give them 4 or 5 million cars. The wireless is another western invention of which the Chinese approve. On this point the report says:

Broadcasting has grown immensely in popularity during the last few years, and there are now a great many stations all over the country. Besides music and news these stations broadcast a great deal of propaganda and advertisements. Many shops have loud-speakers installed to attract passers-by and though the din of raucously emitted Chinese music, mingled with the roar of the traffic, does not appeal to foreign taste, to the Chinese it is apparently an adequate substitute for the brass band that can only be expected on great occasions.

Aviation is also making strides in China. The value to the western manufacturing nations of this potential market is as great as the need of aerial transport to a country as large as China and as ill-supplied with other means of communication. And China feels the need of aircraft not only for commercial reasons, but also for military defence. The course of the recent campaign against the Japanese in Jehol, when Chinese troops, fighting on the most favourable ground, were completely routed by aerial attacks, has filled all classes of Chinese with an overwhelming desire for an efficient air force of their own. All over China, and in Chinese communities abroad, subscriptions have been raised for the purchase of military aircraft. And with the same end in view the Ministry of Finance has recently organised a huge state lottery for the promotion of airways and highways. Half the proceeds are to go to the Government, and the remainder is divided up in prizes. So great has been the success of the first venture, appealing as it does both to the patriotism and the love of gambling of the people, that it has been decided to hold four such lotteries every year.

* Conditions in China form the subject of the first five talks in 'The Far East' Series, the first of which is reprinted on page 63



The Listener

All communications should be addressed to the Editor of THE LISTENER, Broadcasting House, London, W.1. The articles in THE LISTENER being mainly reprints of broadcast talks, original contributions are not invited. Articles in THE LISTENER do not necessarily represent the views of the B.B.C. Yearly Subscription rates (including postage): Home and Canada, 17s. 4d.; Foreign, 19s. 6d. Shorter periods, pro rata.

Anti-Noise

LAST autumn there was launched, under very eminent auspices and with substantial backing from the Press and other organs of public opinion, a movement to abate the growing evil of unnecessary and harmful noise in our daily life and work. It is understood that when Parliament reopens at the end of the month the subject is likely to be discussed in the House of Lords, and there is no doubt that there exists a decided current of feeling in favour of restraining at least the worst of the noise nuisances that afflict our cities. As an organ of broadcasting, which is one of the agencies principally responsible for the use and distribution of sound, we need make no excuse for offering our readers who form part of the great wireless audience the thorough examination which our contributors on the preceding pages have made of the whole problem in its medical, legal, scientific and other aspects. These articles tell us with precision what are the evil effects of noise and also what practical steps can be taken if we so will to lessen these evils.

There are certain preliminary criticisms which the anti-noise movement has to meet before it can expect a large measure of active support (as distinct from passive approval) on the part of the public. The first is that noise has always existed in towns. Street cries and the clatter of wheeled traffic over cobbled stones were afflictions complained of in Elizabethan, Hanoverian and Victorian London with nearly as much bitterness as the hoots and engine noises of the modern motor-car. Yet, though Gay and Hogarth and Cruikshank and a dozen others remind us that the noise problem has always been with us, it is fairly demonstrable that traffic noises have grown more penetrating, more strident and more unhythmically continuous during the past twenty years than they ever were before. A second criticism is that the effects of noise upon human beings cannot be scientifically assessed. The human organism, it is said, has proved itself capable of self-adaptation to other environmental difficulties—why not, therefore, to traffic and other noises? The answer to this criticism can only be given by the medical experts, who can see below the surface of the human reaction to external stimuli, and can tell us what is the real cost of noise to our modern civilisation in terms of nervous disorder and physical debility. It must be remembered that noise, in cities at any rate, has invaded not merely our working hours but also our leisure time, and even our night's rest. It also threatens, on main and by-pass roads,

that quiet of country life to which as many town dwellers as can afford it now flee at the week-ends. The physiological effects of noise have been the subject of research at the National Physical Laboratory and elsewhere; and though such enquiries have a good deal further to go, they have already proved that we cannot afford to remain indifferent to the human wear and tear caused by unnecessary noise.

After answering these criticisms, however, the noise reformers find themselves brought up against a new difficulty. What can be done, it is asked, to take effective action against so intangible and ubiquitous an evil? Mr. Frank Elliott in his article explains the difficulties which face the law, and those who administer it, in trying to check known abuses of sound. The main difficulty is perhaps that so far no simple fool-proof apparatus for measuring noise has been evolved, capable of reliable use outside the laboratory. Until science produces this it is difficult to throw upon the police the task of carrying out the anti-noise provisions of the law, which themselves are vaguely worded. But a strengthening of the law and its administration in this direction can only arise as a result of a wide-awake public opinion insistent upon action—and action not merely by public authorities, but by the commercial interests which manufacture the noise-producing instruments which afflict our peace. Mr. Bagenal lays his finger upon one of the root causes of the evil when he reminds us that 'noise is largely the result of cheapness' in construction and manufacture. In our buildings we have sacrificed the natural defences of thickness of wall and floor in order to get larger, more imposing and cheaper structures—in short, in order to pack more people more tightly into the noise area. Again, there is little doubt that such evil noises as those made by pneumatic road-drills and the cut-outs of motor-cars and motor-cycles could be got rid of if we were prepared to pay a little more for our neighbours' and our own relief. The economic causes of excessive noise probably need as close and impartial investigation as its medical consequences.

The victims of noise, however, can take some comfort from the knowledge that a good deal of research into the subject is today being undertaken both on the scientific and on the industrial side. Ways of reducing noise on trains, buses and aeroplanes as well as in factories and offices are being worked out and gradually applied. It is the function of the Anti-Noise League to encourage these experiments, and above all to work up a movement of co-operation between the experts who understand the causes and effects of needless noise and the lay public which, unconsciously or consciously, suffers from those effects. This movement deserves our support as much as the movement for the preservation of the countryside or any other crusade on behalf of the amenities of life and a higher standard of citizenship.

Week by Week

THE candid visitor to the British Art Exhibition at Burlington House will not try to pretend to himself that he has been witnessing an exhibition comparable as a whole with its French and Italian predecessors. There is no one period of sustained richness in British art to compare with the Italian Renaissance or with the nineteenth century in France. On the other hand, British art, while lacking variety and continuity, achieves a supreme excellence of its own in certain special fields, above all in portraiture (Gainsborough dominating), in landscape, and particularly in representation of animal, sporting and outdoor life. If one were to try to pick out the most distinctively English contribution to painting, it would surely be found in the room reserved (by a stroke of inspiration) for our hunting and riding pictures, which include those inimitable stiff horses, ponies, dogs and their squire masters by Stubbs. On the other hand, English art after the Middle Ages (which itself is finely and

adequately represented at the Exhibition) fails to shine in religious pictures, except in the case of Blake; whilst it noticeably draws more of its inspiration from rural than urban subjects in landscape, and from aristocratic rather than bourgeois sources in portraiture. If there is a gap in the sequence of the Exhibition it is perhaps to be found in the Tudor portraits, which make a less striking show here than we are accustomed to see at the National Portrait Gallery. This no doubt is due partly to the exclusion of 'foreigners'. It must have been difficult for the organising committee to know whom to admit and whom to exclude in this latter category, since British art owes so much to imported talent. Wisely, the line has been drawn between artists such as Holbein, whose reputation was made before they came to England, and those such as Lely, Rou-biliac, Nollekens and Zoffany, who were aliens by birth but made their name entirely in this country. Zoffany is one of those whose work shines with particular grace in this Exhibition; and others whose popularity, we may guess, will stand higher before its close are Richard Wilson and Samuel Palmer. (Incidentally, though the hanging is on the whole excellent, it is a very odd arrangement in the small South room that has topped a fine wall of fiery Blakes and Palmers by three pompous and prosaic portraits.) The pre-Raphaelite room, however, coming after the eighteenth century, will give a good many visitors a more painful shock than they expected.

* * *

The broadcast of Ibsen's 'Ghosts' next week will surely affect the listeners who hear it in two different ways, according to whether they belong to the pre-War or to the post-War generation. The latter, it is to be hoped, will get the artistic thrill of discovering how extraordinarily well plays by Ibsen broadcast in an age when they are out of fashion on the visible stage. But for the former the interest will lie in old memories and associations overshadowing any purely artistic impression which the play may create. "Ghosts", wrote William Archer nearly thirty years ago, 'ranks with "Hernani" and "La Dame aux Camellias" among the epoch-making plays of the nineteenth century, while in point of essential originality it towers above them'. This was the play which for thirty years was the storm-centre of Ibsen's life work, and until well on into the twentieth century ranked in the vanguard of literary unorthodoxy. It would be hard to find a better summary of the changes in our thought on the subject of sex and marriage problems than a bare chronological recital of the play's career: written in 1881, translated by William Archer ten years later and first performed at the Royalty in that same year, then banned by the censor for public performance for 23 years; eventually produced publicly (with a bare ripple of excitement) on the eve of the Great War in July, 1914; and finally now to be broadcast 20 years later still. Some will be able to take their minds back to the 'nineties and recall what Mr. Shaw has called the 'bedlamite' criticisms with which the London Press greeted that first performance: 'candid foulness' . . . 'literary carrion' . . . 'morbid caricatures' were the most gentle of the expressions used by the leading critics. And now the wheel has turned full circle, and nothing can show more clearly how well the twentieth century has escaped out of the nineteenth than the fact that 'Ghosts' can be listened to by all of us on its merits as an interesting, if rather depressing, literary museum-piece.

* * *

There once existed a club of eminent lawyers who met every Sunday for a ramble in the country. They delighted in keeping just—and only just—on the right side of the law of trespass and in confounding irate landowners and gamekeepers with their water-tight case for the defence. But to most of us who cannot be expected to have the specialised knowledge of the ingenious members of this club, a clearing-up of the confusion regarding the laws of trespass and rights of way has been long desired; and it is precisely such a clearance that the 1932 Rights of Way Act, which came into force on January 1 last, effects. For some years the proving of a right of way has been a difficult and—if contested—expensive job. 'When the public have freely used a path for many years as a right without asking the owner's permission and without any objection from him', as Sir Lawrence Chubb pointed out in his broadcast the other day, 'the law shows that he must be presumed to have dedicated or have granted it to the public'. This is simple and sensible enough in theory. In practice, however, the difficulty has been

until now that the law did not say how long the public use must go before dedication could be presumed. What the new Act does is to take away from the Oldest Inhabitant, who is often naturally reluctant at having to come to London to give evidence before the High Court, the responsibility of proving uninterrupted usage of a footpath in his time, and to lay down that ordinarily 20 years' uninterrupted public use constitutes public right; and that in special cases of entailed estates or other types of limited ownership, the period is to be 40 years up to the time when the right is questioned. The benefit of the Act to walkers from the towns, who have not the local inhabitant's specialised knowledge of the district, will, of course, depend largely on the paths being sign-posted. Essex has led the way by sign-posting all the known public footpaths in the county, and when other County Councils have followed suit, the country walker will probably find that he has access to far more paths than he suspected.

* * *

If anything can be done by committees to hasten the happy (and permanent) union between art and industry in this country, that one just appointed by the Board of Trade should have as good a chance as any. The industrialists on it are intelligent; the artists commonsensical. The chairman is Mr. Frank Pick, President of the Design and Industries Association, who has been largely responsible for making the Underground lead London in good design, and who is just the sort of person who is suited to dispel the idea that art in industry is only to the interest of the crafty and finicking few. He, and also Mr. Paul Nash, another member of the committee, have both preached good design in our pages. Of the other members Mr. Oliver Hill has proved in his lay-out of the Dorland Hall Exhibition that good design attracts the public; Sir Ambrose Heal, that it will be bought by the public; and Sir William Crawford and Mr. McKnight Kauffer, that it pays to advertise when your advertisements are well designed. We are glad also to see that those craftsmen who unostentatiously practised good design long before the D.I.A. was heard of are being well represented—by Mr. Douglas Strachan, the artist in stained glass, and Mr. J. Murray Reid, member of an Edinburgh firm with a long tradition of fine craftsmanship.

* * *

Our Scottish correspondent writes: A very deep concern grows upon observers of the Scottish scene as each month's figures show that while unemployment steadily declines in England, it is actually increasing north of the Border. It is true that the position is healthier than it was in January, 1933, if only the total is taken into account, but heavy recruitments of the workless army during October, November and December make responsible men wonder what is to happen next; especially when it is realised that, if the comparison is made with the totals for 1931, Scotland has fallen back while England has recovered. That there is a 'drift South' is manifest. On New Year's Eve the once-flourishing town of Bellshill was left without a single industry, the last of the steel works being closed down in anticipation of its transfer to Corby in Northamptonshire. Even Sir Robert Horne, whose associations are with Big Business, has emphatically declared that the drift must be checked somehow ere worse befall. In the meantime, the average man's concern must be with the social effects of the stagnation, especially in overcrowded Lanarkshire. In most sizeable towns of that large county the percentage of able-bodied unemployment is well over the fifty mark, and rates run as high as 17s. in the £. What we have to face is the fact that, thanks largely to the introduction of labour-saving machinery in the pits, a large proportion of the unemployed must be regarded as permanently so; part of the 'hard core' we hear so much about. Oddly enough, the stranger to these grim towns of the Black Country is impressed at once by the number and size of the new building schemes going up everywhere—if not so much by their beauty—and the impression of a large community living on the State is irresistible. A redistribution of our population will be inevitable sooner or later, and the process may, indeed, be said to have begun on the strength of natural forces. One authentic report shows that most of those who have taken up tomato-growing during the last few years were formerly colliers, and it is from the same group that our Department of Agriculture receives most of its applications for smallholdings. That the Government is increasing the grant for these holdings is something; but the feeling grows that the Scottish problem will not be solved without some elaborate and difficult planning.

Foreign Affairs

What Would Be Your Policy?

By VERNON BARTLETT

HISTORIANS a century hence will probably write of 1934 as the most important year since 1918, because in it we shall in all probability learn whether the last war really *was* the last war or whether there is to be another one.

Several people have told you before now—and I have been one of them—that unless such and such a decision were taken we should all be drifting towards war, and probably you have grown bored with the whole business. Generally the decisions have not been taken, and, although there has been the drift towards war, life has gone on much the same for most of us. The same old worries, the same old pleasures, the same old hopes. But we are reaching a very critical point when decisions must be taken, and as these decisions are going to affect you, you ought to have every possible opportunity of expressing your opinions. Imagine, then, that you are in charge of the government of this country, with the responsibility of choosing between two policies. Forget about your party prejudices—the issue is much too important for that—and let us know what you, as Prime Minister, would do.

Let me try to put the problem before you in the simplest form. The Versailles and the other peace treaties were not bad considering the hatred that had been worked up on both sides during the War, but they contained one great drawback when compared with other treaties: they were dictated and not negotiated. That is to say, they were drawn up by the victors and were handed to the defeated with the order to sign along the dotted line. Such modifications as were made at the request of the defeated countries were very small indeed. At the same time these treaties contained one great improvement upon all other treaties in the past; for the first time in history they set up machinery for settling future disputes by discussion instead of by war. Sooner or later these two ideas—that you can settle things by dictation and that you can settle them by discussion—were bound to come into conflict. They have done so now, and with a vengeance.

France feels that the Treaty of Versailles must be the basis of any order and organisation in Europe; Germany feels that this same treaty is a fetter which she must break if she is to be free. France argues that Germany cannot be trusted and that French armaments cannot, in consequence, be cut down to anything like the German level; Germany, on the other hand, argues that the one idea of France is to keep Germany perpetually in a position of inferiority and that, since there can be no lasting peace while some countries are treated on a different footing from others, she is justified in doing anything she can to bring the period of that inferiority to an end. I have remarked before, in some talk broadcast from the Continent, how depressing—how frightening, I might almost say—it is to sit in a café first in Germany and then in France, and to hear how the ordinary man-in-the-street like you or me says (if he is a Frenchman) that he wants peace but the Germans don't, or (if he is a German) that he wants it, but he doesn't believe that the French do.

Now while that distrust lasts it seems pretty hopeless to expect either that the French will cut down their military strength to the German level or that the Germans will not attempt to build up their armaments to somewhere about the French level. And yet if we get no agreement, if, after all these years of preparation, we cannot sign a convention to reduce armaments or even to limit them at their present levels, we shall all start building against each other again. One country, A, will feel unsafe because country B has a few more cannon. Each time Parliament in A votes more taxes for more cannon, B will feel less safe, and will vote more taxes in its turn. Each country will try to win over allies to its side, and that means secret treaties, suspicion, fear, and, in the long run, war. One does not need to think very much to realise that this rivalry in arms and allies always has ended in war and always will do so. Once we give up the attempt to get international agreement about the fighting strength of each country we shall, definitely and indisputably, be on the road to another war. It may not come for five years, ten years, or forty years, but come it will, and the fear of it will hamper our trade, poison our lives, hold

up the whole progress of civilisation at a time when there are far greater riches in our grasp than ever before in the history of the world.

Now all that sounds abominably gloomy, but it need not be. At least I don't think so. We can't tell until we have tried every remedy and found it fail, and one hopeful feature is that every government—every people, perhaps—has realised during the last six months or so what a bad business it would be if the whole Disarmament Conference were to collapse. We are much more ready to try new remedies than we have ever been, since we know that the failure to agree would end in war—either because the French brought force to bear upon Germany to prevent her from re-arming, or because they did not do so and merely went on arming themselves in the hope of always keeping ahead in a mad race. Germany is going to re-arm if we don't disarm. She may be foolish to do so—personally I think she is, and that if she had shown a little more patience she would have got all she wanted with much less trouble. She may even be criminal. But she is going to do it all the same. If we cannot take the wind out of her sails by disarming, then it is obviously better that her re-armament should be controlled by some sort of convention than that it should not be controlled at all. How can we British get that convention signed?

We may not be able to get it signed unless we are ready to take new risks for peace. The French are not likely to meet the Germans half-way unless they are more sure than they are at present that they would be helped by other Powers if they were attacked. When the last war started Germany did *not* know what the attitude of Great Britain would be and she *did* know that there would be several neutral countries with whose help she would be able to get food and munitions. She took the risk and yet she lost. The only hope seems to be, as Lord Howard of Penrith argued in a recent pamphlet, that the risks should be made so great that no country in the future would ever dare to take them. Those risks can only be increased to that extent if Great Britain adopts an active policy which is the exact opposite of splendid isolation. It seems almost as hopeless to expect peace without sacrificing something for it as to expect money from an insurance company without paying any premium. And the premium we should have to pay—at any rate for one form of insurance—would be a definite promise to join in any action that might be necessary against any country—even a country with which we had valuable commercial or political understandings—if it threatened to set the whole world alight by starting another war.

What would this policy involve? We have already given general promises of help by signing the League of Nations Covenant, the Kellogg-Briand peace pact, the Locarno Treaty and so on. Now President Roosevelt is suggesting yet another pact. Isn't that enough? The answer is 'No', because all these documents are clear enough about what governments ought not to do, but are very vague about what is going to happen if one government, nevertheless, goes and does it. Governments ought not to fight, but what is to happen if one of them breaks its promises and does so? The League Covenant lays down fairly definite rules, but, especially since the Japanese occupation of Manchuria, there is a growing belief that the governments, including our own, will not carry these rules out. Even in the Locarno agreements we in Great Britain are, in the last resort, our own judge as to whether we ought to go to the help of France against Germany or of Germany against France, and there is such a campaign in this country against this somewhat uncertain promise that it will not help much towards a disarmament convention.

No, if we choose the policy of co-operating with other countries against war something of this sort would, I believe, be necessary. We should have to agree in the first place that any country which turns to the use of force and refuses to submit its dispute to be settled in some way by the other countries is an aggressor. In the second place we should have to join with other nations in bringing pressure to bear upon that aggressor. To start with, the country would be morally isolated by withdrawing Ambassadors or Ministers. No money

and no munitions would be sent to it and its exports would be refused in every harbour. Our trade would, of course, suffer, but, the supporters of this policy argue, its sufferings would be much greater if nothing were done to check the danger of war.

No country could long survive this complete isolation. No country would probably even risk it. But for a time at any rate the power to bring some military pressure to bear would also be necessary. Lots of people write to me that the use of force cannot be justified to prevent war, but they do not, as far as I know, tremble with indignation whenever they see a policeman; and an international police force would be just as necessary to prevent war as a police force is to prevent crime. The remedy they suggest—that we should disarm and the others would follow suit—is unsatisfactory for two reasons. One is that no government in this country would do it, and the other is that other nations might not follow suit if we did. We have delayed in building up an air force as strong, for example, as that of France, but our delay has not strengthened our influence in favour of disarmament nearly as much as some more progressive policy would do. Various organisations, such as the New Commonwealth Society, have already provided schemes for an international police force, and many delegations to the Disarmament Conference are in favour of the complete internationalisation of civil aviation to start with. This international force idea is not so fantastic as it might sound at first, if you remember how many different nations were represented in the armies that fought under the supreme command of Marshal Foch.

So much for the policy of collective security. I have given up most of my time to it this week because it gets less space in the newspapers than its opposite, the policy of isolation. 'Why should we worry about Europe?' runs the isolationists' argument. 'The League of Nations would be all right if it worked, but it doesn't. We have disarmed more than any other country and the only result is that we have less influence than we ought to have. We do not want war—we have got a great Empire and nobody can accuse us of a desire to add to it. Therefore we are a danger to nobody. What we want is to develop relations—political and commercial—between the different parts of this Empire, and to be left to do this in peace. If these European countries are not sufficiently civilised to

settle their disputes sensibly we had better leave them to stew in their own juice'.

That, I think, is a fair summary of the argument put forward by most of the people who have lost their belief in the League method or have never had any. Many of them would add that the League has become too much an instrument for maintaining the present treaties of peace, and that unless we get out of it we shall be dragged into wars which are not our concern against people whose grievances we more or less share. Besides, the mediator always gets the kicks and not the ha'pence. There is one rather obvious reply to this point of view, and it is that when Blériot first flew the English Channel in 1909 he put an end to all hopes of isolation—however much we may want to leave Europe alone we cannot be sure that Europe will be equally willing to leave us. But to this argument there comes the counter-reply that we must keep up strong defences and nobody will dare attack us or our trade. If any sacrifice has to be made for peace that is the sacrifice the isolationist would choose.

Speaking three weeks ago in the House of Commons, Sir Edward Grigg said: 'The time has come for us all to realise that there are really only two alternatives before England and the Empire. We must either face the policy of isolation and all that it means, or we must be prepared to enter into some system of collective security which will give a real guarantee'. There are admittedly possibilities in between, but in the last resort we have to choose between this collective security and this policy of isolation. This is the issue for you, as Prime Minister, to decide. Is this country to take risks for peace by stamping out war wherever the first flames show themselves, or is it to concentrate all its attention on developing trade inside this great commonwealth of ours, in the hope that we can build up such walls around it that no flames will be able to cross them and bring us to ruin?

At the end of the talk reprinted above, Mr. Vernon Bartlett asked each listener to send him a postcard, with 'yes' on it if he agreed to co-operation with other countries in the manner outlined, and 'no' if he was in favour of isolation. Those people who have not yet sent in their postcards should do so at once, addressing them to Mr. Vernon Bartlett, c/o the B.B.C.

The Weather House—I

Architecture of the Weather House

By R. A. WATSON WATT

Mr. Watson Watt is Superintendent of the Radio Department of the National Physical Laboratory, and was previously in charge of the Branch Meteorological Office at the Royal Aircraft Establishment

THE Frenchman who laughs at us for liking to talk about the weather isn't so devastatingly clever as he thinks. Because even yet the weather has our daily activities very closely in its control. I don't know what the *Oxford Dictionary* says about 'civilisation', but I have a private theory that civilisation just means getting above the weather. I don't mean neglecting its existence, as the French critic might suggest, but devising ways of doing what we want to do, in spite of the weather. I know the theory isn't weather-proof; one must admit a partial victory over time as an important part of civilisation. But if you take the two things together—time and tempest—you will see very easily what I mean. The essential difference between coracle and luxury liner is ability to live out the weather, with a satisfactory, but much less fundamental, difference of added speed. To arrive at all is a greater triumph than to arrive quickly. The tailor and the house-builder are obvious agents of civilisation against the weather; the inventor of the umbrella would have a statue in every town but for the long-standing artistic difficulty about the sculptural expression of the soul of an umbrella.

These, sketchily, are the reasons for talking about ourselves as living in the Weather House, for looking at the happenings in the air around us, for taking stock of the disappointingly little we know about it, and of the vast tracts of weather wisdom yet to be opened up. If you look up the address of this Weather House in the *Directory to the Universe* which the astronomers have compiled for us, you will find it tucked somewhat insignificantly away at No. 3 Sun Street in Galaxy No. X. In Sun Street, Mercury lives at No. 1, Venus at No. 2, Mars at No. 4.

No. 5 is a tenement with a vast population of minor planets; Pluto, rather a newcomer and a bit of a dark horse, lives at the cold end of the street, at No. 10. Without any voyaging through time and space, to inspect the other thirty thousand million—or three hundred thousand million—stars of our galaxy, and the five million or so other galaxies, we shall find enough grandeur in the Weather House itself to keep us properly humble. Especially when we find time to talk about the price of the weather we shall feel economically very small.

We may just, in this series, get as far as asking why and how the weather happens. We shall hardly get as far as the answers. But if we begin with a much easier question, 'Where does it happen?' the first answer is, 'In the atmosphere above us'. But that isn't answer enough. This atmosphere, which I have called the Weather House, I have ventured to divide into different storeys, of which the lowest storey of all, the ground floor, is the one in which our familiar everyday weather of wind and cloud, rain and snow, fine and fair, warm and cold, unrolls itself. When we talk about this ground floor next week we shall find that it has a ceiling about six miles above our heads, and this figure lets us build up a picture of the proportion which the ground floor, the weather layer, the Troposphere as the learned call it, bears to the whole structure. How big is the house? We know that its floor—the ground we walk on, the oceans we sail on—covers two hundred million square miles, rather awkwardly wrapped on a ball which keeps on spinning like a top. How high is the house? Well, unfortunately, that is one of the reasonable-looking questions which



Striking photographs of the Aurora Borealis in its 'curtain' (left) and 'drapery' (right) forms, taken by the German Northern Lights Expedition of 1932

Paul Popper

either don't mean anything or mean too many things, because the house doesn't have a roof, it just fades out, very gradually and unobtrusively, as we go upstairs.

There is a lot that we can infer about the upper storeys, but we look now at just one thing we can see and measure, with fair certainty, from down below. I shall have to speak fairly often about the Aurora Polaris, the Northern Lights or Merry Dancers, which are seen rarely from Southern England, seen a few times a year from Northern Scotland, seen almost every cloudless evening from Northern Norway. We can measure the actual heights in the Weather House at which these exceptionally beautiful displays of decorative lighting take place. It turns out that the lower fringe of the curtains of auroral light comes down, usually, to about sixty miles above the floor, the topmost hem has sometimes been measured at six hundred miles up. Let us take the ground floor as our unit of planning, let us defy the architects by making every storey of the Weather House the same height. Then we can say that the House is more than a hundred storeys high, and that we can see some at least of the singularly beautiful decoration of the tenth to the hundredth storeys. Above the hundredth we shall not look; but we shall not keep our eyes fixed on the ground floor, however important it is in our everyday lives. When I said 'a hundred storeys', you said 'skyscraper'. But it isn't, it is a very squat building indeed; remember the ground plan of two million square miles, and forget for an instant that it is wrapped on a ball! Or, if we make the Weather House into a kind of Queen's Doll's House, by bringing the earth down to the scale of the dome of St. Paul's, it may clear up the picture. The hundredth storey will only be nine feet out from the solid dome, the ceiling of the ground floor will only be a single inch out. But all we have to say about the weather itself has to do with the happenings in this one-inch shell. Some day we may understand the relationships between the upstairs tenants and the ground-floor people; meanwhile they are very obscure!

How far upstairs can we ourselves climb? What kind of messengers can we use to bring us information from the storeys to which we cannot yet climb? We know a great deal about the ground floor, knew it by looking up from below, and had it confirmed and extended when balloons and aero-

planes began to get up to or near to the ceiling. Sometimes, indeed, they go plumb through the ceiling into the first floor, which is called the Stratosphere. The highest level to which man has yet climbed in the Weather House is just short of the ceiling of the first floor, if, that is, we can talk about a ceiling for the first floor. This stratospheric first floor has been news of late, because the first stratosphere tourists have been making their way to these hitherto unvisited regions—first the Belgians, then the Soviet explorers, then the Americans. Meanwhile the honours are with the Soviet party, who, in the sealed gondola of their balloon, reached nearly 12 miles above ground.

All above this first floor must be explored by non-human and indeed by inanimate messengers; a vast deal of human ingenuity has to be applied to devising them and to deciphering the messages they bring. The simplest messages which we get by what I may call artificial means are brought back by recording instruments attached to free unmanned balloons, usually called *ballons-sondes*. The instruments are very light, and when the balloons burst they parachute back to earth, to be posted back to the Observatory by the finder, whose reward is partly the satisfaction of aiding science, partly a very small pecuniary reward offered on the label of the instrument. Such devices have brought us messages from halfway up the third storey; beyond that height again we must use still less gross messengers. We shall find that sound-waves bring us back a message—in a code which isn't entirely easy to read—from the fourth storey. And the fullest and clearest messages about the ninth to the thirtieth storey, or thereabouts, are brought by wireless waves which we send up and catch after they have been up and down again. Some of the messages about intermediate floors, and the little we know about the topmost storeys of all, come to us 'by courtesy of' certain visitors from abroad, whom we shall meet in later talks. Meanwhile we note that the higher we want to push our exploration of the House, the finer and more tenuous must our messengers be; first the heavy aeroplane, then the floating manned balloon, then the *ballon-sonde* with its spidery aluminium instruments, then the sound-wave in air, then the tiny waves of light which alone add something about the top storeys to what they themselves bring us from the intermediate and lower storeys.

Inquiry into the Unknown

By GERALD HEARD

Mr. Heard here introduces a new series of talks which will show how modern science has begun to explore and describe phenomena which, till quite recently, were dismissed as either supernatural or false

THIS is a scandalous subject: don't let there be any doubt about that. The title is not startling and may seem to you a little vague. Most of us realise now that in every subject there is much more that is unknown than is known. You can make an inquiry into the unknown in every science from astronomy to physiology. But in this series of talks, inquiry into the unknown doesn't mean mapping the

it. It is not the way that science itself has advanced. For at the beginning of most sciences, the phenomena studied could not be brought into the laboratory. Fire-balls—the true thunderbolts—for example, could not and still cannot be produced and studied in a laboratory. They have had to be studied wherever nature chose to display them, and no one could say for certain when and where that would be. They were and they remain rare and freakish phenomena, uncontrollable and indefinable. On these grounds orthodox science for a long time denied their existence. Today out-of-door observers have proved that fire-balls do exist and at last photographs have been taken of them.

And science has not only had to begin by studying happenings which couldn't be made to take place in a well-lighted laboratory. Science has often had to begin by studying things which couldn't be seen at all. The cosmic radiation which penetrates sixteen feet of lead can nevertheless only be recorded by the most sensitive of instruments and none of our senses give us a hint of its existence, though it is always passing through our bodies. It is not treason to truth to go on studying phenomena although you cannot yet lay down the rules under which the phenomena must occur.

Yet the phenomena about which this inquiry is to be made are the most difficult that men can investigate. For, first of all, only a very few of us have ever experienced happenings clean contrary to commonsense, except in conditions of darkness, etc., when it was very difficult for us to be sure what was going on. That is a serious difficulty: But there is an even graver obstacle to attempting to find out what may be behind these strange happenings. That is due to the fact that nearly all of us feel very strongly about them: either we want them to be true, we want something contrary to commonsense to take place, or, quite as often, quite as strongly and quite as unfortunately for the truth, we want them to be untrue. That is why what are called psychical phenomena, happenings which may be evidence of the working of unknown forces, are in a class by themselves. That is why they are peculiarly and exasperatingly difficult to investigate. When we need to be absolutely unbiased, because the evidence is so slight, so scattered and so



Early experiments in mesmerism (1834)

ground that lies behind each official science. It means attempting to explore areas clean off the scientific map. Professor T. H. Huxley defined orthodox science when he said, 'Science is organised commonsense'. The goal of orthodox science is to be able to explain the whole of nature by the working of simple mechanical laws. Is there anything to be found beyond that? That is the question these talks will raise. Are there facts—is there evidence which can't be fitted into those simple mechanical commonplace laws?

But why call such an inquiry scandalous? Surely today even physics, the first and strictest of the sciences, has ceased to have anything to do with commonsense? That is true. But we must remember that these strange new theories of physics—about bending space and contracting and expanding time—are all based on quite commonsense observations. The calculations and the deductions made from the observed facts may be elaborate and very difficult. But about the facts themselves no one has any doubt. Any person possessed of the ordinary number of common senses can view the evidence for himself—though he may not be able to make the calculations whereby that evidence is put in order and made to agree with other evidence. It is when we go beyond commonplace observations that our difficulties begin. When the facts themselves are in dispute, then scandal arises, motives begin to be questioned, honesty doubted.

So orthodox science says: Leave such a subject alone. Until there is produced evidence which can be repeated by any researcher in a scientific laboratory, there is nothing to explore. If you go on trying to inquire and investigate you will only be deluded and deserve to be deluded, and your so-called evidence will be worse than useless, for it can only serve to feed greedy superstition. There is much to be said for taking up such an attitude. But there is one great argument against



Poster advertising performance by the Davenport Brothers (1879), mediums who attracted much attention in the U.S.A. half a century or more ago

Illustrations by courtesy of the National Laboratory of Psychical Research

strange, we find that almost all of us start with strong views as to whether there can be such facts and if so what they mean.

That, of course, is an utterly unscientific attitude and we cannot hope to discover truth if we start in that spirit. 'Beware of finding what you are looking for' is sound scientific advice. But the other side of that piece of advice is 'Beware of saying nothing is there, because you wish nothing to be there'. The neglect of this double warning has held up psychical research.

A glance at the history of science and of what we may call psychics will make that clear. For two hundred years science had been advancing steadily before psychics crossed its path. It had been more and more successfully explaining away everything in the universe as due to the working of mechanical laws, until Laplace, the great astronomer, when asked by Napoleon, 'Is there not a spirit behind it all?' replied, 'Sire, I have no need of such an hypothesis'. But just then the awkward fact of mesmerism turned up. Dr. Mesmer came to Paris, where he demonstrated mesmerism (what we now call hypnotism—the way to use a hidden capacity in our minds to give us strange powers over our bodies). He was examined by scientists and they had to own that he had got hold of some power which they knew nothing about, but which they were certain was not what he said it was. That, in a phrase, has been the position of science ever since, when it has tried to settle this question. For the problem that Mesmer raised was, 'Can the mind really alter the body?' If it could, then materialism was untrue. All through the nineteenth century, science assumed materialism to be true and on that assumption made amazing advances, advances which seemed to have no limit. Science had, therefore, to dismiss as inherently impossible all evidence of mind being anything but a by-product of matter. As Huxley said, mind was only the steam given off as the bodily engine worked.

Yet all through the last century, while science advanced, other queer facts, for which science had no use, kept on turning up. Not only was Hypnotism now being practised by qualified doctors; and pains relieved and several stubborn diseases cured. Other odder powers came to light. For instance, water divining—the power of finding water by some unknown sense—became better and better proved. Mr. Besterman will tell you more about that in the next talk. And serious people kept on vowing they had actually seen ghosts quite lately in London. Other intelligent people attested they had had true visions of the future: others that friends still alive but far away, sometimes at the moment of death but sometimes when they were quite well, had suddenly appeared before them. Some people when hypnotised could read passages in books shut up in libraries far away, others who could not draw a line could make wonderful fantastic pictures. Some people seemed to become possessed by another character who spoke about places long ago disappeared and in another language. Strangest of all, some people seemed to split up into several persons as though personality was a sort of clay out of which one could model one figure or several. And men who studied foreign races reported that many of them seemed to have strange powers. They could put themselves into a trance and when they came awake again they could say what was going on hundreds of miles away. They could also put themselves to sleep, so that they seemed dead, cold, rigid and breathless, have themselves buried for weeks and then be dug up and come alive again. They could stick knives through their flesh without pain, without bloodshed and the wound healed almost at once. They could put red-hot irons on their flesh, on their tongues and not be burnt. They could walk slowly through fire and not be singed. What was science to do about all this? One thing was clear: these happenings would not repeat themselves regularly whenever people should choose to test them. At the same time, so many people, many of them highly educated, swore that they had seen these strange things that it was possible that happenings, so rare as to be unknown to science, did take place now and then. If you had a really open mind you could not dismiss the question.

So in 1882 the Society for Psychical Research was founded, and many other such societies have since been founded. Soon it became clear that there was a nucleus of fact which could not be accounted for on the current orthodox scientific principles. There was a case for investigation. But then how was the investigation to go ahead? We have seen there were three great difficulties in the way. First, the evidence was itself rare: second, those few people who claimed to be able to produce it on demand were nearly all unanimous in their refusal to undergo careful tests; third, the scientists, the men most qualified to test it, could not believe that by any chance it could be true. The scientific principles of materialism ruled it out of court. However, since 1900, the old-fashioned materialism has been

discarded by physics itself and so scientists no longer have to dismiss the evidence on that ground. It still remains tremendously difficult to find out what actually happens when a happening is owned to be rare and the laws under which it takes place are still quite unknown. But once scientists will allow that something may be there, and those who have had a psychic experience will allow that we really cannot at present have any clear idea of what it is, a new age of research is opening.

Of course, we are only at the beginning. For the more we study the subject the more we realise how inherently complicated it must be. In advanced physics it is found that you cannot observe the electron without altering it, for the ray of light, without which you cannot see it, must upset it. The same difficulty, but in a more acute degree, must turn up in advanced psychology, in psychics, for you cannot observe a mental state without altering it. Probably all psychical phenomena are subject to this very awkward disturbance. Still, as physics manages to advance among the too sensitive electrons, so psychical research may manage now to advance in its still stranger exploration of rarer and even less understood forces.

That, then, is the line this inquiry will take. It will start by making no assumptions. Mr. Besterman, in 'How Psychical Research is Done', will tell you how a number of researchers today are attempting to use scientific apparatus and carefully-thought-out tests to collect evidence of rare faculties and happenings. He will also tell you how water-divining has been tested and brought to light. The question naturally arises whether some of these rare powers could be explained by modern scientific theories of radiation. So in the succeeding talk Lord Charles Hope will deal with rare happenings which seem to take place round rare human subjects. Many of the people who claim these powers are both odd and simple-minded. Could they have special endowments? Savages have been said to have such powers: so anthropology, the scientific study of foreign races, may throw light here. Professor Seligman will therefore tell you something about primitive people's practices, magic, etc., and in the succeeding talk he will, as a physician, link this up with our new knowledge of the back of our own minds, the primitive side of us which survives in all of us still. We shall then be ready to listen to further evidence of strange mental powers. First the evidence for telepathy, for minds being able to communicate without any physical means. That will be given by Mrs. Salter, who has studied this matter very fully. Then further evidence of dreams and prevision, as an extension of powers of which telepathy is an example, will be given by Dame Edith Lyttelton. After that the Assistant Postmaster-General will tell us about ghosts and haunted houses from experiences for which he can vouch, and Sir Oliver Lodge can then put before us in the light of all these reports the question, 'Do we survive?' As a summing up, a Professor of Philosophy will tell us what are his conclusions. This is very important. Quite a number of famous physical scientists have been convinced by this evidence. The answer against accepting their evidence as decisive is—they were specialists, and, outside their own subject, they were easily misled. All right. Let us hear the present conclusion of the whole matter from a man whose job it is to show how to think clearly, test evidence and arrive at sound conclusions. I think in the end we shall find our minds widened and, whatever conclusion we arrive at about psychical research today, we shall realise that our deepest knowledge now will look like ignorance tomorrow.

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The Far East—I

The Chinese Farmer and his Family

By ANN BRIDGE

This talk, by the author of 'Peking Picnic', begins a series of talks which will aim at giving the listener a visual picture of China, Japan and Manchukuo, in which he can set in perspective current views from the Far East

THE Chinese farmer-class, the country-people working on the land, still represents roughly 80 per cent. of the 400-odd millions of Chinese. When we think of China we should think first, not of Emperors, sages, politicians, bandits or war-lords, but of the farmers—that enormous, thrifty, and infinitely laborious population, the silent majority, whose activity supports the more vocal minority.

Since China extends from the Tropics to a latitude level with the Pyrenees, her agriculture is of many kinds. I shall deal here, not with the tea-growing, rice-growing centre and South, but with the less known farmers of Northern provinces like Chihli and Shantung, the growers of maize and millet, the two great staple cereals of the North; with their mountain orchards of pears, apricots and persimmons, and their subsidiary crops of wheat, pea-nuts, and sweet potatoes.

First a word about their climate—a vital matter to farmers. Backed up against the greatest high-pressure system in the world, unaffected by cyclonic disturbances, the climate of North China is as regular as clock-work. The rather low rainfall, about 24 inches yearly, occurs mostly in the four months of June, July, August and September, for which 17 inches is a normal fall; two snowfalls in November and February punctuate a rainless winter of blazing sun, tearing winds and zero temperatures. The Chinese farmer knows exactly what weather to expect

and when to expect it; he need never fear harvests ruined by unseasonable downpours, nor land in winter too sodden to plough. And in maize and millet he has chosen the two perfect main crops for his climate. Resistant to drought while immature, as rice is not, they require an immense amount of moisture at their period of maximum growth, and in the heavy summer rains they get it.

Some modern observers, like Professor Tawney, have commented on the extreme conservatism of the Chinese agriculturalist and his reluctance to employ new methods. I think the Chinese farmer has good reasons for this. What can we teach him? His Biblical methods of farming, using the stone roller hitched behind an ass, the wooden-handled plough, the broad hoe with a blade 13 inches across, have kept the land in good heart, bearing heavy crops, for forty centuries, unassisted by any imported fertilisers, which were unknown till recently and are but little used even now; whereas after barely 100 years of cultivation the corn lands of, for instance, the United States must already be fed heavily with artificial manures to keep them in bearing. And consider the population which China has supported for four thousand years. A favourite bit of journalism is 'China's Teeming Millions'. I want to give you some idea of how they do in fact team. A particular Shantung farm of 2½ acres supported a family of

twelve, a cow and donkey (the farm team) and two pigs. This is at the rate of 5,072 persons per square mile of cultivated ground, or 192 per forty-acre farm. Another holding of 1½ acres maintained a family of ten, or at the rate of 3,840 persons per square mile. Such farms exist in thousands. And these minute holdings maintain their owners *well*: the countryman's physique is on the whole superb, the women are comely, the children well nourished, rosy, and mischievous.

The Chinese have perfectly grasped the main principles of



Economic map of China, showing density of population and distribution of industries

Map drawn by W. F. Higginbottom

agriculture; the rotation of crops, and that man can only continuously take out of the soil what, in some shape or form, he puts back into it. They have even learned empirically, what science only fully revealed to the West in 1888, that leguminous plants are necessary for the maintenance of soil nitrogen; and one of their old fixed practices is the growing of legumes, either in rotation, or for the express purpose of fertilising the soil. As fertilisers, they prepare them with infinite trouble—the green growth is placed in compost pits in layers, spread with liquid mud from the canals, or with subsoil dug for the purpose; left, worked over, turned and re-worked, till it is in perfect state for use, and then carried out and spread by hand upon the fields.

But the great secret of Chinese farming is that these people have learned the very hard terms on which alone the soil can support them in such multitudes—only by never wasting anything which can be converted, at no matter what cost of labour and time, into food, fuel or manure. All human waste is religiously collected and preserved in neat pits maintained for the purpose, then mixed with earth and ashes, and worked up into a dressing for the fields. The lengths to which they will go to conserve animal manure are amazing. On the narrow tracks between village and village, shallow depressions are scooped out at intervals, and lined with wayside weeds, the passing



The Ch'ing Hsui valley, with maize fields and walnut trees

Photograph by the Author

camels and donkeys are halted in these to void their excrement or urine, so that even the wayfarer shares in this intelligent economy.

North China is practically treeless; coal and charcoal are usually beyond the farmers' means, and the problem of timber and fuel is solved by various economies, all laborious. The stout woody stems of kaoliang, or sorghum millet, which grow eight feet high, are used for fences and roof-battens; its roots, like those of the maize, are dried and burned, so are the empty corn cobs. The stalks and leaves of maize are chopped for use as fodder. But many other strange things feed the earthen stove in a Chinese farmhouse, with its brick flues running under the k'ang or sleeping platform which stretches all across one side of the living room. Wheat is pulled, not cut, and its roots are chopped off and dried for fuel; so are the haulms of pea-nuts and sweet potatoes; women and children, dressed in blue tunics and trousers, go out to the grave mounds, the stony waysides, and even up into the hills, and cut all growth of weeds from every foot of ground, to be dried, stored under shelter, and burned. The ashes go back to the fields. But not the ashes only. The very bricks of the flues, sun-dried, not baked, are changed about once in four years, when they begin to crack and emit smoke, and the old bricks, carefully pounded, carry their accumulated treasure of soot and potash out to nourish the crops. The earthen floors of the house itself, richly charged with nitrogen from human occupation, are periodically scraped to a depth of three inches, and the surface, if not sold to the nitrate merchant, is put on the fields. What a race, which

nourishes its soil with the chemical content of its very sweat!

By an ingenious system of inter-cropping, the ground is made to yield several harvests. Winter wheat is sown in rows some 28 inches apart, and intersown in spring with rows of millet; when the early ripened wheat is pulled, soy beans, say, are planted in its place, to ripen after the millet is cut. By planting at these distances, the crops can be tended at every stage, and the surface kept broken to conserve moisture. Every field looks as neat as a Duke's flower-beds. For miles around the cities, market-gardening is mixed with farming; early onions, early potatoes, cabbage, salads and radishes succeed one another in quick and ingenious rotation.

The food of the people is almost wholly vegetarian. They use no milk and little meat, for animals are too wasteful a means of converting vegetable matter into human food. Wheat and maize are ground, and the flour used for pancakes, a sort of macaroni, and doughy pastes—millet is cooked whole, without salt, and eaten like rice, with every sort of relish and flavouring—pickled vegetables, bean-curd, salads and sauces. Nothing is too much trouble, for the housewife as for the farmer; the women trip to market, their polished black coiffures shining above their blue tunics, and come back with a dozen or more little packets of relishes swinging on loops of bast from their fingers, for a single meal. How they work! They wash the clothes, in laughing groups, by the streams or canals; they grind the meal in hand-mills; water is fetched morning and evening from the village well, in long pointed wicker



Children irrigating a Fukien farmer's field by treading the pump

E. N. A.

buckets borne on shoulder yokes, or perhaps in a cherished kerosene tin, and tipped into the great earthenware storage jars; they go afield to cut weeds for fuel, or to lead the goats to the grave mounds; they help in the harvesting of pea-nuts, in transplanting, and in gathering the orchard fruit and persimmons.

Also the women labour perpetually at maintaining the family wardrobe in repair. Rigid economy rules in this, as in all else. Nothing is thrown away—every garment is patched and repatched till it is rotten with age, and then burned to furnish heat and ashes. The winter dress, too, must be provided for. The Chinese warm their houses very little even in the bitterest weather, seldom above 40 degrees; they do not go in for heavy outdoor overcoats, but instead quilted wadding is stitched inside their ordinary cotton clothes, so that indoors and out they go about, neat, unencumbered, in trousers and tunic, but puffed out a few inches, all of them, like robins in frost.

Hard as the terms are on which these farmer families live, it is wonderful how well they treat their children. Every village is swarming with them, hardy, stout and jolly; there is always a bit of coloured thread to bind the row of top-knots on the heads of the baby girls, often a dab of rouge for their cheeks; when the sweetmeat seller comes round with his wands of candied crab apples or 'Peking dates' there always seem to be a copper or two to buy with. At 6 a.m., in summer, the children trundle off to the village school, a modest building with learned



Donkeys bearing loads of forage

Photograph by the Author

mottos painted in huge characters on its whitewashed outer walls; there to sit, each on his little goatskin mat, hour after hour, learning the maxims of Confucius by heart in a deafening sing-song which fills the unpaved dusty village street where yellow dogs sleep in the sun, and fowls, feathered to the heels, scratch for a living.

Few of the farmer class can read or write. Without books, letters or papers, their main diversions are laughter, American cigarettes, and news carried from mouth to mouth. In 1926, peasants within 200 miles of Peking asked us for news of the Emperor, happily oblivious of the fact that China had already been a Republic for fifteen years. The earth is still their principal companion and instructor—politics, unless forcibly

expressed in the misery of a local war, means little to them. Yet the most striking thing about these people is their immense contentment. Poverty is extreme, but there is no squalor. Squalor is really the fruit of a moral defect—a shiftless, hopeless letting things slide. The Chinese farmer never lets anything slide; no concern of his ever drifts helplessly from bad to worse. An incredible moral discipline, exacted by the demands of the soil they live by, has affected an entire race, so that waste has become actually painful, and ceaseless industry natural and inevitable. Is it perhaps this discipline which still gives to the Chinese, the oldest nation in the world, a vigour, a vitality, and an energy equal to that of any other people on earth?

The Modern Columbus—XII

Manhattan—the 'Island of Mountains'

By S. P. B. MAIS

Broadcast from New York on December 29

NEW YORK, whose shape is that of a leg of lamb—and a very young lamb at that—stands on an island called Manhattan, an Indian word meaning 'the place of the whirlpool' or 'island of mountains':—both interpretations suit it equally well. This island is made of granite: after seeing New Orleans and Chicago I fully expected New York, like them, to be built on a swamp. It was discovered for the Dutch in 1609 by an Englishman, Henry Hudson, who was looking for something else—the North-West Passage. He was extremely disappointed. Nobody at that time wanted this island much, for the Indians sold it to the Dutch in 1626 for twenty-four dollars' worth of trinkets.

New York from the Sea—

I saw it first from the sea on a pearly misty morning in September, and the sight of the tops of those shining skyscraping towers rising out of their billowy bed of grey gossamer, exactly as my castles in the air used to appear in dream days, had me instantly in thrall. As the hours passed they seemed to rise higher and higher with maddening deliberation—just like Aphrodite rising from the sea, with more and more nymph-like splendour, until at noon they stood at last in all their naked, glittering glory, sun-kissed, simple, altogether lovely.

As we passed up the Hudson River I had eyes for nothing else but these million-eyed pinnacles of bright stone. Staten Island, the green Statue of Liberty, New Jersey—even Ellis Island—meant nothing to me. My eyes were fixed on the sky-scrappers of New York. Their dissimilarity in height, material and design only added to their fascination. It was the ensemble rather than any individual tower that held me: their beauty rather than their height that kept me spell-bound. The heights are certainly imposing. The Empire State Building, for instance, is five times as high as Salisbury Cathedral. But, after all, height is relative. The Empire State Building would not be noticed in the Grand Canyon. It is only beauty that is absolute. But these heaven-pointing fingers of stone are more than beautiful. They symbolise the whole spirit of this nation, its forthrightness, its love of experiment, of adventure, and of extremes, its extreme faith in human endeavour.

—and from Above

After seeing New York from the sea I looked down on it from the top of Radio City, which is not quite a thousand feet above street level—and found that my sea impression was right. I could compare the tapering spire of the Chrysler Building with the tall thin rectangular mass of stone on which I was myself gently swaying, and realise that on the summit of the Empire State Building the tall mast is for mooring dirigibles. I looked down on over five hundred buildings standing above twenty stories, while fifty of them were over 400 feet. Box-like hotels, cathedral-like banks, gothic shops, and gargantuan offices; and far, far below, completely dwarfed, rose the spires of churches. And suddenly by my side I caught sight of a 'praying mantis' beetle.

After seeing the city from above I went round it in a boat full of people eating pea-nuts. We started up the East River. Boats kept putting out from the wharves on their way across to

Brooklyn, and on a long thin model island in mid-stream I saw a number of convicts at exercise, and as the waters grew narrower above Hell Gate and we entered the Harlem River I saw coloured men fishing from row-boats. The whole of the north end of the island is filled with wooded walks and granite rocks that are always wet. We swung west through the Ship Canal into the Hudson River, and I felt just as if I were going down the Bristol Avon under Clifton suspension bridge, only in a dream, for everything was magnified about ten times. In the first place, the Hudson River is about a mile across, and on the New Jersey side the wooded banks rise vertically in a rock formation known as the Palisades. Below me, spanning the river, rose the loveliest bridge I have ever seen. A delicate grey network of vertical cables with an exquisite sweeping arch of steel dipping into vast towers of open steel filigree to carry a roadway 8,700 feet long 250 feet above the river. This is the George Washington suspension bridge. Below the bridge, on this hot sunny afternoon, were men and girls paddling in canoes. On the banks I saw a long line of wooden shacks built by the unemployed, and then the wharves began again. It is thirty-one miles round the island, but there are no fewer than 780 miles of docks, and there seemed to be no end to these grey, broad wooden fingers jutting out into the Hudson River. I passed the *Berengaria*, and it is significant that whereas in Southampton Docks she looked gigantic, in New York I mistook her for a tug.

The city itself is carved out rectangularly into eleven long avenues running north and south, and about five hundred short streets running east and west. The famous Fifth Avenue acts as a sort of central parting, for all streets on the East River side of it are East 45th Street, East 55th Street, and so on, whilst the streets on the Hudson River side are known as West 45th Street, West 55th Street, and so on. Only one road refuses to obey these mathematical rules, and that is Broadway, which strikes a diagonal line across the city and then makes a bee-line for 150 miles to Albany. And in the very heart of the city is Central Park, a rectangular patch of eight hundred acres of woods, lakes, rocks and hillocks, where five thousand squatters used to live in a tangle of marsh and under-brush. It now contains about thirty miles of walks, and they are so very careful about exercise over here that they have white arrows to mark the routes for a two-hours' walk, blue arrows for forty-minute walks, red for half-an-hour's walk and yellow for the twenty-minute trails. Nearly everybody I met in Central Park was either dashing about on roller skates or in a car: a few ride, scarcely anybody walks.

A Comparison with London

I have told you quite enough of the geography of New York to make you realise how simple a place it is to get about in compared with London, but I am not so foolish as to imagine that with so slight an acquaintance I can interpret its spirit, which is as elusive as but quite different from that of London. There are many superficial points of resemblance. The shops on Fifth Avenue are like the shops in Bond Street, people throng 42nd Street exactly as they throng Oxford Street, Broadway is like Leicester Square, and Wall Street is just Threadneedle Street all over again. There is no difference whatever

between the Metropolitan and New York subways—they are both dirty and both noisy. St. Thomas' Church, Fifth Avenue, New York, and St. George's, Hanover Square, London, each cater for society brides; the only difference is that whereas the door of St. George's is riddled with bullets, the ornamentation over St. Thomas' is of orange blossom skilfully turned by the architect into dollars.

Grammercy Park, with its own enclosure for the use of residents, has many London counterparts, particularly among the squares of Bloomsbury, but then New York only knows one Grammercy Park. Whenever New York manages to sit down out of doors it goes to Riverside Drive, which is far handsomer than the Thames Embankment at Chelsea; and those who live there bear no kind of resemblance to the inhabitants of Cheyne Walk. New York has its stream of commuters converging on the city every morning from Brooklyn or the Bronx, just as London has its stream of suburban traffic flowing in from Croydon and Golders Green. But New York, in spite of its statues of Shakespeare, Scott and Burns, its wonderful Museum, art galleries, big hotels and flourishing theatres, is not London. London has no Harlem—a city within a city, entirely populated and policed by coloured people; London has no freight trains running through her streets; London has no such railway stations as the Grand Central or the Pennsylvania; no central-heated palaces of dazzling brightness; London has no white wisps of steam puffing out of its main highways; London is not on the sea; London is no melting pot of all nations as New York is; London has no Radio City. New York's temper is quicker, more exciting; its climate quite different.

It is lucky that I saw it first in the golden glory of a hot September day; for now it is so cold that I get an electric shock whenever I touch anything. There is electricity in the air here. There is excitement everywhere—you never know what is going to happen next. On Christmas Day I saw a hansom and an open landau plying for hire on exactly the same spot I saw a horse-drawn sleigh and a blue-and-white snow-plough on Boxing Day. It was as if a magic wand had been waved. On Christmas Day men went out in top hats and spats and morning coats in spring sunshine, and the next day they were all slipping about in snow boots, con coats and fur hats in the worst blizzard I have ever known. And the streets were changed into uneven blocks of ice.

A City of Extremes

New York is a city of extremes, both of climate and of living. I have never been either so hot or so cold as I have been here: I have never seen evidence of luxury and want so close together. Just outside a millionaire's house on Riverside Drive is a succession of the poorest huts that ever men had to live in. I have just been shown over the Federal Bank carefully shepherded by guards armed with machine guns and tear-gas bombs, and seen more tons of gold ingots than I thought existed in the world; and I have seen men sleeping out on the granite rocks of Central Park with only an old newspaper for sheet and covering. It is very difficult to get exact figures of unemployment over here, but it looks as if the corner were being turned. There seem to be fewer unemployed standing about in the streets, only if there is a traffic stop the men rush forward and try to sell you gardenias or toy pigs, and then it is hard to distinguish between the panhandlers, ordinary traders and the genuine unemployed.

On Christmas Day the Girls' Service Club offered a free dinner to any girl who was out of work, and when I arrived I found that only 63 girls had taken advantage of that offer. All the unemployed girls I talked to were well-dressed and could only have been out of work for a few months. When the great fall-of-snow came, 18,000 unemployed were immediately engaged to remove it, and there has been a big drive to put men on public work. I have a taxi-driver's evidence that men may be seen any morning up town going through the garbage in the trash cans for something to eat, and I myself have seen those shacks of bits of wood pushed up on every rubbish dump. But I have never seen such distress as we have at home—on the Clyde, the Mersey and the Tyne. So far as I have been able to judge, conditions over here are much better than they were, but you must remember that I didn't come over here primarily to feel the industrial pulse, nor have I had the time. I went round the United States in exactly the same way that I went round the United Kingdom on my 'Unknown Island' tour, just looking at anything which came my way without any knowledge and with very little power of discernment. What I have seen I have

described to you. Some of you may express surprise that I found it so good, but you can't be more surprised than I was. I did not know until I got here that the scenery of Arizona and New Mexico were so colourful or so majestic; I did not know until I experienced it just how pleasant a thing it is to bask in the sun at Phoenix in November. It was fun to see such strange and lovely scenes, and to experience so many vagaries of climate. It was pleasant always to know, both in hotels and on trains, that the food would be invitingly various and perfectly cooked. The general standard of comfort over here is far higher than ours, but what has made this tour so inexpressibly happy has been the people I have met. They all had a trait of incomparable kindness and unfailing courtesy; their one idea was to see how they could best help. I have indeed come near to being killed with kindness. They never stand on their dignity, they never ask who you are, no one I have met over here had the slightest idea what I was doing, or really cared—it was enough for them that I was a stranger and in need of help.

I don't believe there are any grown-up Americans. How I envy them their incorrigible, their buoyant, almost flamboyant youthfulness, their impetuous generosity, their never-failing sense of fun—they laugh when they bump each other off the roads in their cars; they laugh when it snows. How I envy them their insatiable curiosity about everything that goes on in the world; their zest for music, for literature, for art, for science, for travel, for society. Don't imagine that I am blind to their faults. I don't at all object to their speech—it is robust and more expressive than ours; they have given fresh life to an old vocabulary. But their spelling, which they imagine to be phonetic, seems only too funny for words. Their 'yea' is 'yea', and they know the exact price and size and weight, height, depth, width, and population of every place in the world: it's always the biggest in the world, and they are always right, which is infuriating to me. But will no one ever teach them how to use a knife and fork together?

And now my job is done. Just to redress the balance I am going to tell America next Tuesday just exactly how good a place England is, and as you very well know, I wouldn't live anywhere else in the world for a king's ransom. But to my hosts, whose kindness I can never possibly repay—the whole American people—I would say: 'Gee! You're swell!' That's the highest term of praise I know in any language. But it is with a great deal of reluctance that I bring myself to say 'goodbye'. It is a reluctance tempered by the hope that in 1934 England will be crowded out with visitors from the United States, and the United States will be crowded out with visitors from England. It's the only way to ensure real understanding and goodwill.

The Shapes of Death

The shapes of death haunt life,
Neurosis eclipses all in gradual shadow:
Unrequited love not solving
The need to become another's body,
Wears black invisibility:
The greed for property
Heaps a skyscraper over the breathing ribs:
The speed-lines of dictators
Cut their own stalks:
From afar we watch the best of us—
Whose adored desire was to die for the world.

Ambition is my death. A flat thin flame
I feed, that grows my shadow. This prevents love
And offers love of being loved or loving.
The humorous self-forgetful drunkenness
It hates, demands the slavish pyramids
Be built. Who can prevent
His death's industry, which when he sleeps
Throws up its towers? And conceals in slackness
The dreams of revolution, the birth of death?

Also the swallows by autumnal instinct
Comfort us with their effortless exhaustion
In great unguided flight to their complete South.
There on my fancied pyramids they lodge
But for delight, their whole compulsion.
Not teaching me to love, but soothing my eyes,
Not saving me from death, but saving me for speech.

STEPHEN SPENDER



New York—an Impression

Photograph: Francis Broughiere

Relief by Public Assistance

Indictment of the Public Assistance System

By Dr. SOMERVILLE HASTINGS

THE Unemployment Bill now before Parliament proposes the removal of the able-bodied unemployed and their dependants entirely from the tender mercies of the Public Assistance authorities. As things are at present, an insured person receives Unemployment Insurance benefit, which has been misnamed 'the dole', for the first twenty-six weeks that he is out of work. His circumstances are then enquired into by the Public Assistance Committees and the Means Test applied, and if he has no relations capable of giving him support he is granted transitional benefit for another twenty-six weeks. Then at the end of this time, if he is still unsuccessful in obtaining work, he has to apply once more to the Public Assistance Committees. Now all this is to be changed and a new authority is to be formed which will take over completely from the Public Assistance Committees the care of the able-bodied unemployed.

It is difficult, of course, to say whether this will be a good thing or a bad until we know more of the constitution of the new authority. One thing, however, is certain. Nothing could be more short-sighted or inhuman than the present administration of Public Assistance, especially as regards the unemployed and their dependants. I am speaking, of course, mainly of London, as I have little personal knowledge of what goes on elsewhere. No doubt also conditions vary somewhat in different parts of London. I have friends who have an intimate knowledge of the administration of Public Assistance in nearly every one of the ten districts into which London is divided, and each one assures me that his district is the very worst.

But what is wrong with the administration of Public Assistance in London today? First of all, it is not the fault of the Ministry of Health—the supervising authority—or at any rate, not mainly so. A circular issued by the Ministry states definitely: 'When out-relief is given it should be carefully adapted to the needs of the case and adequate in amount'. Public Assistance relief is administered in London in an unsympathetic, grudging, miserly spirit with little thought as to the needs of the case, and none as to the adequacy of the relief given. The object of most Public Assistance Committees seems to be to keep the able-bodied from applying for relief for as long as possible by offering them the workhouse or a concentration camp known as Belmont, and, when this is unsuccessful, to give them relief which is, in most cases, quite inadequate to provide for the necessities of life. I would have you especially note that the Workhouse (now known as the Institution) or Belmont is offered as a 'deterrent' to try and induce the unemployed man to accept starvation or work for low wages rather than be separated from his family. There is no question of economy, for each is much more costly than out-relief. They are so much detested that I have been told by men who could speak from personal experience that they would prefer prison to either.

At present an unemployed man receives 15s. 3d. a week for himself, 8s. a week for his wife, and only 2s. a week for each child, irrespective of the age of the child. This sum is obviously quite insufficient, for it is agreed by all that a pint of milk a day is necessary for every child, and this will cost 3d. a day or 1s. 9d. a week in London, so that only 3d. is left for everything else. The utter inadequacy of this 2s. is also indicated by a recent investigation into the diet in Poor Law Children's Homes, in which it is shown that the food recommended would cost 4s. 6d. a week if bought at contract prices.

If Public Assistance relief is to be adequate it must be sufficient to provide for all the necessities of life—home, food, clothing, cleansing materials, firing and light. Now what will each of these cost per week? Let us try to work it out. A Committee appointed by the British Medical Association investigated the minimum weekly cost of the food necessary for health

and efficiency. It varies between 2s. 8d. for a child of one and 5s. 11d. for a full-grown man. A boy of fourteen, according to these experts, needs just as much food as a man. Then there are boots and clothing costing perhaps 2s. a week for an adult and 1s. for a child, cleansing materials at not less than 3d. a week per head, and lighting, cooking and warming at say 3s. per week per family. So that for a family of five—father, mother and three children aged, say, six, ten and fourteen—the minimum weekly cost of essential needs would be 36s. 4d. *plus rent*, although such a family would only be receiving 29s. 3d. per week as Unemployment Insurance benefit or 'dole'. In practice there are, of course, many other expenses, as even in the best regulated families crockery, cooking utensils, furniture and bedding do sometimes get broken or worn out and need replacement, and there are also in some cases fares, compulsory insurance, trade union subscriptions, etc., that have to be met.

Lastly we come to the admittedly difficult question of rent. Dr. Crowden calculates that in London about 35 per cent. of the income of most working-class families goes in rent, but I know of families who are paying anything up to 50 per cent. It is no good assuming, as Public Assistance Committees often do, that decent accommodation for a family can be obtained for 5s. a week; that is simply impossible in London. As a matter of fact, the man with a family of young children is in the greatest difficulty of all, as many landlords will not accept him at any price. What actually happens is that such families go on paying their 10s. or 12s. a week as rent and starve themselves in consequence.

There can be no doubt whatever that many families are really starving. I do not suggest that many, or indeed any, are short of bread, but I am certain that thousands are lacking foods that are essential for healthy growth and development. I myself medically examined 53 children of unemployed families early last year, and in the opinion of another doctor as well as myself, more than half of these children showed evidence of unhealthy conditions that are usually the result of a deficiency of the right sort of food. A special medical examination of children in the L.C.C. elementary schools took place recently, and great satisfaction was expressed that only 6.5 per cent. were considered by the doctor who examined them to be poorly nourished. We must remember, however, that the signs of under-nourishment in children take time to develop and are not always easily recognised, though they invariably leave a scar on the constitution that lasts throughout life. You will not be surprised, therefore, to learn that among elder children—that is, those from the secondary schools—7.2 per cent. of the boys and 12.2 per cent. of the girls were reported as under-nourished.

So far I have been dealing with London, because it is of London alone that I can speak from personal experience. I am afraid, however, that Public Assistance administration in some other places is not much better. A careful enquiry into the circumstances of a number of working-class families was made under the auspices of the University of Liverpool in 1930 and 1931, and it was found that of the families in receipt of Public Assistance relief nearly 90 per cent. were below the poverty line—that is to say, had insufficient money coming into the home to purchase a bare sufficiency of food, clothing, fuel and other necessities of life. A good many years ago a German doctor said to me: 'I have travelled over most of Europe, but the most wretched-looking people I have ever seen are to be found in the East End of London'. I wonder if he would say this today? I am not sure. But I am certain of this, that if we still desire to be looked upon as a civilised nation we must do more for those who through no fault of their own are suffering severe privations. Moreover, it will be cheaper in the end, for our workhouses are filled with those whose health and efficiency have been undermined by lack of the necessities of life.

Defence of the Public Assistance System

By the Rev. FREDERICK CHALLENGOR

I HAVE LISTENED very attentively to your observations on the subject of Public Assistance, and I may say that some of your statements have filled me with amazement. In the first place, what is at the back of your mind is not Public Assistance in all its phases, but only the side of it which has relation to unemployment. It would be a great mistake if it were understood from your remarks that this side of the work was the predominating side. It isn't, of course; it only concerns about one-tenth of the

work. There are thousands of children who come under the care and control of Public Assistance Committees in the country. In London alone, there are nearly 14,000 of them. Then there is the care of the aged sick and infirm who have not sufficient income to meet their needs and no friends who will or can take the responsibility of attending to them. In London there are 20,000 old-age pensioners who are assisted by the Public Assistance Committees to maintain their independence in their own

homes. The Committees take the responsibility for the welfare of all these old people, supplying a doctor in time of sickness and providing everything which the doctor certifies to be necessary. Then there are the people of all ages who, for one reason or another, are inmates of institutions and general hospitals. Again taking London as an example, there are 18,000 of them. These figures show how gigantic is the task of the Public Assistance Committee. It is like being responsible for the clothing, feeding, housing and general welfare of a big town population.

We must not forget, too, that the lads and girls for whom the Public Assistance Committees are responsible have to be established in life as useful citizens. When they arrive at school-leaving age they have to be trained and equipped to take their part in the work-a-day world. For several years, many of them are not in the position to help themselves; homes have to be found for them and contact with them maintained until they can stand on their own feet; meanwhile, their wages are supplemented and they live as other lads and girls live, enjoying that freedom of life which youth loves so much. I take it, seeing you have so little criticised this side—the major side of the work of the Public Assistance Committees—that you are satisfied that it is being done sympathetically and effectively. Repeatedly, friends, relatives and visitors to our institutions, children's homes and hospitals, express their pleasure and gratitude for all the care, thought and attention bestowed upon both young and old whom they visit.

Now let us turn our attention to that very small part of Public Assistance work which you say is so grudgingly, so unsympathetically, so thoughtlessly and so stingily performed. These are strong terms to use in describing how this particular work is carried out. And when I think of the ladies and gentlemen of all classes who constitute the Committees responsible for this work, it staggers me to think that they can be so classified. Most of them are citizens well-known in their respective localities as being public-spirited workers, ready to sacrifice very many hours every week in the service of their fellow citizens. There can be no thought of personal gain in their minds, and their sacrifice in the cause of the destitute is never paraded before the public eye. The mental attitude of Committees is not what you suggest in the remarks which you say are constantly heard. I sit on all the committees in Area X—there are seven of them—visiting one and then another in turn; I am speaking, therefore, from personal experience and not hearsay.

You began with reference to the new Unemployment Bill. No one contends that it is perfect—it is the best that can be done in the circumstances. As you say, in a few months' time all able-bodied unemployed will be dealt with in another way apart from Public Assistance altogether. The 'able-bodied' stand in a class of their own and need special treatment. The resources of aged and infirm people don't, as a rule, fluctuate; the unemployed able-bodied are in and out of work periodically. In London, the average period of relief for able-bodied persons is less than 3 months. During times of employment they have opportunities of replacing clothing and domestic articles which have worn out, and in this way they manage to carry on. Old people are deprived of

this opportunity and in consequence the committees grant extra relief in their case. The same is true with regard to what are called 'ordinary cases', i.e., those persons who, through deformity, chronic sickness or permanent disability, can never support themselves—they receive a larger grant of relief to enable them to cover all necessary expenses of life.

I venture to say that there is no country in the world where the aged and infirm, the chronic sick and the permanently disabled, are treated so generously and sympathetically as they are in this country. And surely this can be said also with regard to the able-bodied unemployed. In normal cases of unemployment, i.e., where there is no exceptional expense involved in maintaining the home, it is assumed by Committees that for a brief period of unemployment the insurance benefit will generally suffice until work is again secured. Some have friends and relatives who help, some have savings—the millions of pounds in the Post Office Savings Bank, in co-operative stores and provident societies, etc., represent sources which are available to some—and where unemployed have savings put aside in this way naturally, if they are in need, they are expected to draw upon these savings before coming upon public funds for maintenance. Surely you will agree that this is a right principle to follow. The poor form no small proportion of ratepayers, and why should they be compelled to contribute even a small sum towards the cost of maintaining small capitalists?

Your reference to Belmont as a concentration camp is absolutely wrong. The place bears no resemblance to a camp—it is a residential training colony. You are also quite wrong when you say that committees try to keep men from applying for Public Assistance by threatening to send them to Belmont or the workhouse. As a matter of fact the procedure adopted by Committees does not involve any possibility of a man being sent to Belmont on his first applying for relief. This possibility only arises, as a rule, some months afterwards, when the period of unemployment is continuous, or there is something exceptional in the case. I challenge you to produce any evidence of the truth of your statement. Under the Poor Law, relief can only be given to able-bodied applicants on condition that they are willing to be set to work if called upon to do so. This work is provided for them at Training Centres. Anyway, have you ever been yourself to Belmont? I go regularly and very seldom have I heard any complaints made by any of the men.

The scale of relief you mentioned and would like to see in operation is quite impracticable. With a rent of 15s. the total relief afforded would be 51s. 4d. for a man, wife and three children, whereas the wages of hundreds of workmen in London do not exceed 40s. to 44s. per week. These men would be much worse off than those receiving Public Assistance based on your scale. And as the family grows in number from three children to six or seven, the relief would grow with it, so that another 12s. or 15s. would be necessary, making a total of 63s. 4d. or 66s. 4d. per week. Under these conditions the incentive to seek work and become independent would be destroyed. Public Assistance Committees have no control over existing rates of wages, but these must surely influence the amount of relief granted.

Out of Doors

New Varieties for 1934

By RICHARD SUDELL

A FEW days ago, I found a pile of the newest gardening catalogues on my desk. Now, although I have been playing the game of gardening for many years, I still get the same thrill from a catalogue as I expect you do.

Among the pile of catalogues one especially caught my eye. It was printed in German, and it had with it a photograph of a rosebush.

'Nigrette, the new black rose', I read.

'Hm', I said, 'Who wants a black rose anyway?'

One of my assistants promptly replied, 'It might be good for London gardens. It wouldn't show the smuts!'

Well, I suppose it might, and anyway, there are probably thousands of gardeners who would welcome even a black rose as a novelty. This question of novelties is, of course, what makes the new catalogues so full of interest. To give you some idea of the extraordinary number of new plants that are introduced, let me tell you what the secretary of the National Chrysanthemum Society wrote to me. He said that though a hundred and forty novelties were recently submitted to his committee, only forty received first-class certificates. But forty good novelties of one flower! And the same thing going on with the roses, carnations, gladiolas, sweet peas, shrubs, and all the rest! It makes you wonder whether the same novelties that were acclaimed with loud trumpets ten years ago are still in commerce; the remarkable thing is that some of them are. Take, for instance, Orange King marigolds. They just can't be beaten, and though raisers continue to send out novelties

like the Radio variety, the marigold with quilled radiating petals, there will always be a steady demand for Orange King. Again, Pink Beauty and Scarlet Beauty are still first favourites among Sweet Williams, and have been for years.

Last summer I went round a number of the seed-trial grounds and made special notes of the general decorative effect of the new flowers as well as their individual beauty. Here are some of the new varieties being put on the market. Please take no notice of the order: it would be quite impossible to place them in any order of merit. A nasturtium, Golden Morn, shall come first, because the nasturtium is everybody's flower for every purpose. There is also the sweet-scented nasturtium, Golden Gleam, which was found on a Mexican ranch. It had been grown within the walls of the owner's private garden for ten years and could not be found anywhere else in the country. Antirrhinums and Clarkias were both in full flower at the time of my visit and I specially noted a Clarkia called Glorious. Its flowers are double and its colour a bright cherry red. In the large patch in the seed ground, the spikes were so full of bloom you could hardly see a leaf. And among the antirrhinums, or snapdragons, Welcome was conspicuous, with its hefty spikes of brightest crimson, standing 18 inches high. So also was His Excellency, a fine flame-coloured variety. But the growers told me that Malmaison was the best pink snapdragon, and Majestic Orange King one of the finest for bedding.

No garden is complete without stocks, whether it is the garden on a window sill or the garden of a hundred acres.

Lovely contrasts are possible among the new shades, which come true to colour, if not always fully double. For instance, I noticed Antique Copper and Parma Violet; the name suggests its colour in each case, and I could well imagine a bedding scheme in which both were used. I believe nearly every gardener tried the new godetia Sybil Sherwood last year. I saw a fine bed of this variety, which I was told all came from one plant and took several years to fix. The seed will be distributed this year, and will produce flowers of a new bright salmon pink.

Nature is indeed so bounteous with new varieties of sweet

plants set near an open window fill the room with fragrance. The double mixed *Jacobaea*, which flower on and on like sweet peas, are best described as perfect cut-and-come-again annuals. Belladonna delphiniums and the new stock flowered larkspurs are also fine subjects for cutting, and easily raised from seed and flower the first season. Their pale blue and salmon rose flowers are some of the loveliest possible blooms for the vases, and, of course, you all know how charming they are in the garden.

Felicia is a lovely blue edging flower, about four inches high. I think it belongs to some rather well-organised trade union,

for it opens late, and always knocks off at 4.30, when it shuts its petals for the day. It refuses to open at all on rainy days. But on sunny days it makes up for lost time by its wonderful beauty. There are numbers of South African annuals that behave in this manner, but one that hails from that sunny country is kinder: the *Brachycome*, or Swan River daisy, opens wet or fine, and remains open. *Ursinia* are comparative newcomers to our gardens, but they have already proved their worth. *Aneithoides* is a neat little chap, literally smothered with flowers of the brightest orange.

Another fine flower for edging beds is marigold, Fire Cross, although to some the perfume is rather unpleasant.

Then there is a *Matricaria*, golden ball, a flower somewhat resembling a *Pyrethrum*. This ought to figure more regularly in the amateur's seed order.

Now I want to give you a few hints as to how to read a catalogue for yourselves. First of all, of course, think out your ideas for next season's garden, and jot down roughly what seeds you want, for example: Two long rows of *Godetia* or some other bright annual to edge the shrub borders. About fifty good stocks for the small beds in the lawn. Half-a-dozen patches of colour, early and late, in shades of orange, blue and red for the mixed border. A good splash of colour for late summer when you get back from the summer holiday, and so on.

Then open the catalogue and try to find the right seeds for each purpose. The large masses it is best to fill with tried varieties, like Majestic Orange King snapdragons. The smaller patches are where you can afford to experiment with novelties, and for these you turn to the 1934 introductions.

So far I have referred only to flowers. But I will end with one suggestion for the allotment holder. Don't be too conservative.



Seed trial ground

General view showing the care with which everything is labelled, and the clean cultivation

pea that it takes an exceptional novelty to hold its own. One of the most outstanding is Grand National, which took umpteen medals and certificates in the British Isles and abroad last year. In the bud it is almost yellow, but it opens to a large frilly deep cream flower. Then there is Lady Loch, a pearly pink flower, quite distinct in colour. I am sure this will become very popular. I am mentioning only three sweet peas, and the third is Gigantic, a white flower, very fragrant, and uncommonly large. If you like white flowers you will be delighted with it. I prefer the richer colours like Pinkie, crimson Sybil Henshaw, and the deep lavender Ambition.

There is a good deal to be said for petunias. They are fine for edgings, window boxes, or for greenhouse pots. The All Double strain, which comes from Japan, comes a hundred per cent. true doubles. Previously it was only possible to get 30 or 40 per cent. double from one packet of seeds. The plants are about eighteen inches high, and in a sunny position they make an amazing show. You can have them in white, pink, purple, and some have gay patchwork kind of markings on the petals.

So far I have only mentioned good varieties of flowers which are so common that they must be known in every garden. There are others a little less common, but quite as easy to grow.

There are annual rudbeckias—thimble flowers. Kelvedon Star is a variety which has golden flowers with chocolate centres. They are on long stems, suitable for cutting, though the plants are more dwarf than some rudbeckias, and if you sow the seeds in March, and plant them out the third week in April, you will get many weeks of loveliness in late summer. And how do you grow your lupins? If you have never tried raising them from seed, get a new variety called Crimson Beauty. It comes almost true to type from seed, and in the mass in the trial ground, it looked also true to its name.

Then nemesias. Get the large flowered mixture and you will have a really great show. Scarlet, orange, red, blue, white: you have to see a bed of them mixed to appreciate their true loveliness, a real feast for the gods.

Of course, you know heliotrope or cherry pie well enough. But why not grow it from seed? The dwarf type, Olympia, is specially fine for town gardens, and for pot culture. A few



Scented Nasturtium

Golden Gleam has brilliant orange yellow flowers and clear green foliage

Photographs: The Horticultor Co., p., ny

It pays to try not only new varieties, but also uncommon vegetables, such as salsify and sugar pea. The sugar peas are especially good, and I believe they are getting more popular. They save trouble for the cook, for they are eaten whole, and the flavour is generally liked. You grow them just like ordinary peas, and if you don't know them yet take my tip and try some next year.

*The Listener's Music**The Writing of Music—II*

IN the first of this pair of articles—I dealt with the elementary side of the subject. For very simple music little more is necessary; but as the amateur usually tries his hand at some kind of vocal composition, it may be useful to add some practical advice on the little problems that arise from the combination of words and music.

By the way, does the amateur realise the confession of weakness implied in the fact that his first attempts are usually songs, hymn-tunes, Anglican chants, 'vesper hymns' and other small vocal fry? Isn't his choice dictated by his need of the double help that a text provides, (a) as a stimulus to his invention and emotion (generally the latter is more perceptible than the former); and (b) as a ready-made metrical scheme which easily suggests some sort of musical ideas? The latter aid is the greater of the two. If you doubt this, you have only to make a few mental repetitions of a verse cast in a simple and pronounced metre: you must be entirely devoid of musical invention if you don't soon find a tune shaping itself. Well, that is the way some of the world's best-known songs have begun; and many thousands of other tunes of varying quality have stopped at that point for lack of ability to put the idea on paper and provide a piano accompaniment. However, I must not allow myself to be drawn aside from music-writing into composition; I will only add, before getting back to my real subject, that the amateur who begins with the Spartan determination to dispense with a textual prop will probably go farther in the long run. Let him develop the power of inventing and writing down (*away from the piano*) well-shaped melodies of regular pattern—four-bar, eight-bar, etc.—and study harmony until he can clothe his tunes with natural, well-laid-out chords, and he will have taken a good step in one of the most interesting and useful of musical activities. It is no great distance from that stage to the creation of little keyboard pieces which he can play himself, independent of singer or writer; he will then experience the joys of the musical creator—joys none the less keen and intense for being in miniature.

One of the chief difficulties of the amateur song-composer seems to be in the matter of 'ranging' his text and music. In making his fair copy, he will dodge a good deal of muddle if, bar by bar, he calculates the space required for the words—which will sometimes be much more than that needed by the notes to which they are set. For example, two lines of poetry may each contain (say) eight syllables: but those syllables will vary considerably in their totals of letters. Over and over again one sees a composer begin by writing the notes of the voice part, and giving each bar the same length; when the words have to be added he finds that the bar-space ample for such frequent combinations of words as 'It is a', 'O my own', 'Far from me', and dozens of others is not nearly enough for the no-less-usual combinations of three or four times the length—e.g., 'Through the night', 'Strength shall come', 'Light through clouds', etc. This seems—and is—a very obvious point; but it is often overlooked, with disastrous results to the page that was intended to be so neat and legible. (And remember that neatness and legibility have a practical value, besides their inherent attractiveness. You want your song to be sung—perhaps even published: a muddled and untidy copy is a handicap in both respects.)

It is a good plan to use for the words some kind of plain script rather than ordinary writing; but don't use capitals—they demand too much space and trouble, and are not clear when small. Moreover, capital-writing is apt to fall away in quality after a few dozen words. Some experienced composers find it a good plan to write the words in ink of a different colour from that used for the music, marks of expression, directions, etc.; others reverse the process, using the special ink only for the directions and other scraps of non-textual writing. This is a commonsense aid to easy reading and performance.

The question of a fair copy is worth looking at for a moment. Many beginners take a long time to realise (I did!)

that the use of pen and ink should be reserved for the finished product. Hundreds of hours, pints of ink, and acres of manuscript are saved by the simple process of working with a soft pencil and a good rubber. When you are satisfied that the job is done, put the manuscript aside for a few days. If a playing-through then leaves you still satisfied (you'll be lucky—or easily pleased—if it does!) you may burn your boats by inking over your pencil. (You will probably not realise till this stage the importance of a *very* soft pencil used lightly.)

A few other tips: Don't use unnecessary accidentals. If you plunge into a remote key for more than a bar or two, alter your key-signature; don't subscribe to the unpractical convention (followed even in the most august circles) of retaining a signature that doesn't apply, contradicting it by dozens of accidentals. As to accidentals, you ought to know enough of harmony to be aware that G natural and F double sharp, C flat and B natural, etc., though produced by the same key on the piano are by no means the same on paper. The choice depends on the tonality of the context. (By the way, nobody, so far as I am aware, has attempted to explain why, in bar 7 of the Adagio of the Emperor Concerto, Beethoven wrote G natural when by all the rules of the game he ought to have written F double sharp. I can recall no similar instance of wrong notation in his music.

It may have been a mere whim; anyway, if the reader will turn up the passage he will see two reasons why such notation, even though used by a Beethoven, is bad: (1) it is harmonically wrong, and (2) it involves the use of two accidentals instead of one. I add, however, that there *are* occasions when the use of 'false notation'—as it is called—is justifiable, e.g., for purposes of simplification.) As with accidentals, so with expression marks and directions: don't use them unnecessarily. A dull and dry piece of music is not made fiery and emotional by the addition of such flowers of speech as 'molto appassionato', 'con fuoco', 'patetico', 'lugubre', 'brillante', 'sospirando', etc. And if you *do* drop into foreign tongues, be consistent, and refrain from such hybrids as one used by a well-known English composer in a piece of music lying before me—'very legato!' Can we imagine a German composer writing 'sehr loud' or a French one 'très quick'?

Here, with my task far from completed, I stop. Happily, the reader who wishes to follow up my discursive advice can do so by reference to printed music issued by good publishers. Best of all, he should obtain Elliot Button's *Musical Notation**—the only book on the subject, so far as I can discover. He will find there practically all he need know, clearly set forth with an abundance of music type illustration. The book is notable, too, for a preface by Sir Edward Elgar—a delightfully intimate essay. If anybody doubts the interest and importance of 'mere' music-writing, he has only to read what is said about it by our greatest composer.

HARVEY GRACE

The Information Department of Chatham House (Royal Institute of International Affairs) has just published the first of a series of memoranda designed to make accessible to the general public the specialised information which the Department is able to collect. This memorandum on *The Republics of South America* (price 3s.; to members of Chatham House, 2s.) aims at providing a survey of the continent as a whole which may be useful to those whose interests are mainly concerned with one republic, or one activity, e.g., railways, engineering, etc. To this end, the arrangement is by subjects—climate, communications, cultural aspects, political background, and so on—rather than by countries; there is frequent cross-reference from conditions in one state to similar conditions in another; there are plenty of facts, and no personal opinions (by its constitution, Chatham House is precluded from expressing, as a body, any definite view on any question), and there is a comprehensive bibliography, as well as a number of useful diagrams and tables. All the material is based on the most recent first-hand information; and it is certainly to be hoped that similar surveys will be published of other parts of the world. We also hope that there will be enough demand for this one to justify the next being printed instead of duplicated.

*Novelty, 2s. 6d.

The Art of the Northern Nomads

By Professor ELLIS H. MINNS

LOOK at the deer, the lioness and the mule in Figs. 1, 2, 3. The creatures are full of life but the stylisation is complete, the modelling in planes meeting along definite ridges, the accommodation of the whole creature to a simple tidy scheme, the masterly simplification. Here we have a special art, the art of the northern nomads. Till within the last thirty years it was hardly known and its merits quite unrecognised. Until modern art turned aside from literal

them, rarely does he survive three centuries. However, conquer he can, and far beyond the limits of the steppe we find the traces of his victory. The nomads' life is not really primitive; it took some learning. We may suppose that they are derived from the hunters of the northern forests, taming the animals they hunted, and venturing out into the open plains. Very likely they began with reindeer, and then took to the horse, and so to cattle.

Over the whole stretch of the steppe and in the regions accessible from the steppe we find a special art with its own subject-matter, its own stylisation, and this art we ascribe to the nomads. But we hardly ever find it pure. It has been suggested that the pure nomad had no access to permanent materials, he might fashion horn, bone, wood, leather, felt or textiles, but not metals or stone. It was not until he could compel metal workers to work to his order that metal things in his taste could come into existence: and the alien craftsman would be apt to contribute something of his own. The nomads were not all of one stock. East of Dzungaria they have been mostly Turks or Mongols; west of it we find at first Iranian speakers, already perhaps mixed with

Turks, who have certainly been coming west for fifteen hundred years. But east and west the life is the same, and the art has a general uniformity, amid a diversity due largely to the different nationalities of the subject craftsmen.

If we take the Altai (Fig. 4) as the centre we find Iranian influences strong in Western Siberia (Fig. 5 is rather late) and between the Urals and the Caspian, but Iranian itself probably means a mixture of Nomad and Mesopotamian, for the Medes and Persians wore the nomads' coats and trousers and used a sword akin to Fig. 6, worn in their peculiar way. On the Kuban River flowing westwards along the North of the Caucasus we get the oldest tombs with the purest nomad things (Figs. 1, 2, 3, sixth century B.C.) queerly mixed with Assyrian work and some archaic Greek. The Greek element intrudes much more in later times and in South Russia where dwelt the Scyths (sixth to third centuries B.C.) among whom the style was first recognised, so that their name is often applied to all its products, but the Greek strain rather spoils them. Scythic raiders have left their tombs in Bulgaria, Rumania and even Hungary (fifth century B.C.), but here they must have been few. Isolated finds have been made even in Galicia and Lusatia. Greek and native influences are strong here. Round about Kiev and Poltava north-west of the Steppes we find another mixed art (fifth-third centuries B.C.), and Scythia even



Fig. 1. Ornament from a shield (?) in gold—Kuban, Kostromskaya (6th century B.C.)

Figures 1—5 from 'Scythian Art', by Gregory Borovka (Benn)

representation and thought in terms of planes and simplification we were not ready for it.

Right across the old world from Manchuria to Hungary stretches a belt of grassland or steppe. Rather to the east of halfway the Altai and T'ien Shan ranges narrow it and make the Gate of Dzungaria. East of the Altai other forest-clad mountains form its northern boundary: to the west it is all plain, but the open steppe merges through parklands into thick forest. Except at Dzungaria the southern boundary is sandy or salt desert, save along the Caucasus and the Black Sea coast.

To live on the grassland man is dependent on animals, either as a hunter or as a herdsman. This means that his life is conditioned by the animals' lives, and where they go he must follow. They must go where there is grass, and summer pasture may be far from winter pasture. He can have no fixed home; he must live in tents or wagons and be ever ready to pack up and move on. And it was the nomad who first used our convenient coats and trousers. This mobility has given the nomad his place in history. He can readily assemble his full forces and is almost irresistible in attack. But once he has left his steppe and conquers settled folk he is doomed to be absorbed by



Fig. 2. Ornament from a shield (?) in electrum—Kuban, Kelermes (6th century B.C.)



Fig. 3. Pole-top in bronze—Kuban, Ul'ski (6th century B.C.)



Fig. 4. Deer carved in wood—Katanda, Altai (c. 3rd century B.C.)



Fig. 5. Ornamental plate from girdle-clasp, in gold—West Siberia (c. 1st century B.C.)

influenced the barbarians of north-east Russia (fourth to first century B.C.).

North of the Altaic centre, if centre it was, the nomads dominated the bronze workers upon the Upper Yenisei, particularly about Minusinsk (Fig. 6). It is only in Siberia that we get the nomad style on stone (fifth to first centuries).

This is in the Eastern province of the nomad style, marked by the presence of knives such as Fig. 7, by peculiar belt-plaques such as Fig. 10, and other special forms. It extends through the Sayan mountains to the East of Lake Baikal, and by such places as Noin Ula, north of Urga in Mongolia, across the Gobi to Ordos within the great bend of the Yellow River. From this region countless nomad things have come in recent years, they may be

(Figs. 7, 10), and its wild congener the ibex, the antelope, the yak, and smaller game, boar (Fig. 8 D) and hare (Fig. 8 A, E). Then we have the carnivores, lion or lioness (Figs. 2, 8 G, 9, 10) and its mythical hybrid the griffin (Fig. 5), also the panther, lynx and the wolf. Further there are birds—*raptors*, especially their beak-heads (Figs. 6, 8 H—these may be griffin-heads), swans, cocks and even snakes. Scenes of combat are frequent (Fig. 5) or the carnivore is mauling the head of his victim (Figs. 8 F, 9); rarer are breeding scenes. The human figure hardly occurs except on a few plaques of the class of Fig. 5 or their imitations from Ordos, representing legendary scenes.

Professor Andersson contends that the representation of animals on the hunter's clothes and gear had a magical intention, like that of the

Paleolithic artists: but the latter usually indicate that the quarry has been hit. Another idea is that the animals are totems: but we want to know more before accepting this. Certainly the nomad's life was wholly bound up with his animals and their enemies, and he represented what he saw before him.

But how did he represent it? Nothing could be more conventional and less naturalistic, yet it is all instinct with life. Fig. 2, the electrum lioness from Kelermes, with amber inlay in the ears and eye, is reduced to a scheme of planes meeting along definite arrises, the feet are each a still more conventional animal curled nose to tail, and the main beast's tail is made up of like beasts. But how admirable is the effect! So with the golden Kostromskaya deer, equally stylised (Fig. 1), and that in wood from Katanda (Fig. 4); the attitude, by the way, is probably running, not lying. The bronze pole-top (Fig. 3) from



Fig. 6

exhibition of them was organised by Professor J. G. Andersson at the time of the recent Congress of Art History in Stockholm (Figs. 8-10).

But all along the line, when we have subtracted what is due to the alien craftsman there remains something common to all nomadic art. For one thing its subject-matter is nearly always an animal. First of all comes the reindeer, from Ordos to Hungary (Figs. 1, 4). The reindeer has been supposed to be the totem of a ruling tribe. Certainly it was in high honour; at Pazyryk in the Altai the horses buried with the dead man were masked as deer or griffin and bore saddles suited only for reindeer. Next comes the horse (Fig. 5) commonest on his own trappings, ass and mule (Figs. 3, 8 C), ox, sheep



Fig. 8

Fig. 6 (above, left). Dagger in bronze and iron, 11 3/4 inches—Yenisei (4th cent. B.C. - ?). Fig. 7 (above, right). Bronze knife, 6 1/2 inches—Ordos (c. A.D.). Fig. 8 (above, centre). Bronzes from Ordos (c. A.D.). A-G were given to the Author by Captain W. B. Mayer

Fig. 7

E.H.M.

Ulski is simpler and even more perfect. But the style has its own complications. One we saw in the Kelermes lioness; parts of a great animal may be fashioned into heads or bodies of other beasts, or such heads introduced into the composition: e.g., the beak heads round Fig. 8 C, the supplementary heads in Figs. 9 and 10. Or the actual body surface of one animal may bear another creature. At Kul Oba in the Crimea a deer very like that from Kostromskaya was covered with beasts in the archaic Greek manner. Or the surface is diversified with spirals or other motives, as in Figs. 4 and 9.

Then there is the scene of animal combat, or rather preying: this goes back to immemorial antiquity in Mesopotamia, and seems to have come thence to the nomads through Assyrians, Iranians and Greeks, but they took to it with delight. Fig. 5 shows a splendid example, one of the many gold objects found in Western Siberia two hundred years ago and saved by Peter's order for his *Kunstammer*. These things are mostly in pairs forming magnificent belt-clasps. The griffin is attacking a horse, each animal in its passion has twisted round its hindquarters. On thigh and shoulder is a dot and comma pattern taking the place of the more frequent spiral and offering a setting for turquoise or other stones that satisfied the love of bright colour. The griffin is a Mesopotamian beast, but must have been interpreted by the nomads as the symbol of all aggressive forces: the Greeks thought of it as dwelling in the North, and put it on everything destined for the Scythian market.

A similar combat* was shown in these pages some months ago—a winged and beaked lynx attacking a deer. It is part of a carpet found in 1923 in the tombs of the Hun princes at Noin Ula North of Urga. With it was a bit of Chinese lacquer dated 2 B.C. The colours have perished but must have been bright. The finder, Kozlov, scrubbed them out with soda.

Fig. 4 gives us the style applied to wood carving by the nomads of the Altai. This, like Fig. 9, shows the hip curl, which



Fig. 9. Bronze belt-plate—Ordos (c. 1st century A.D.)

got into nomad art from Iran but became one of its most tangible features, and was passed on from it to Celtic and Teutonic art in the west (see Figs. 2, 3, and 8 of Mr. Kendrick's article on Viking Art in *THE LISTENER* of December 6, 1933).

Fig. 6 comes from the Upper Yenisei, but similar things are found in Ordos. The Yenisei things go back to 500 B.C. and the Ordos to the centuries on either side of A.D. Daggers of more or less the type of Fig. 6 are found from Korea to Hungary, and on the Euphrates, and are shown on the sculptures of Persepolis.

Figs. 7-10 all come from the Ordos region; knives like Fig. 7 might be from the Yenisei, and are related to the degenerate knives used as coins by the Chinese.

The little bronzes in Fig. 8 are for sewing on to straps and clothes. In A and B the eyes, as often, are reduced to round holes, so also the nostrils. B and C have animals curled right round, a motive common to the whole style. Figs. 2 and 4 have nearly got there: it is characteristic of the tidy shapes into which the beasts are persuaded. C is surrounded by tiny beak heads. H is a better example of this motive which plays a great part in nomad art. The tails of the hares on E are



Fig. 10. Bronze belt-plate—Ordos (c. 2nd century A.D.)

little heads. The sheep F might have been even more definite in shape if the head had been turned round on to the shoulder: anyway the horns are never allowed to stick out inconveniently (cf. Fig. 1). Even such a fantastic combination as the belt-plate of Fig. 9 is rounded off into a simple shape: this rounding-off nomad art has in common with Chinese.

Fig. 10 shows another belt-plate, one of a pair: the body of a carnivore whose ear makes the fastening hole, is covered by two admirable sheep heads, and above are two friezes of heads—antelopes and horses. These friezes of heads recur as far West as Permian, and such repetitions may have passed into Teutonic art. Plaques much like this with twelve-headed griffins bear Chinese inscriptions, yet are curiously like the Beast in mediaeval apocalypses. For though the last people to practise nomadic art were the Avars who came to Hungary from the Far East in the fifth century A.D., its influence is traceable even in our Middle Ages.

Mr. Oliver Baldwin in his broadcast talk on January 3 told how Eisenstein came to make the film 'Thunder Over Mexico', which is now being shown for the first time in England at the Marble Arch Pavilion. 'I have just seen Eisenstein's long-awaited picture, much cut and otherwise mutilated, which is now at the Marble Arch Pavilion. This film has had an interesting birth. The director, Sergei Eisenstein, is a Russian, and he was invited by the pundits of Hollywood to go there and make a picture. Once there, he soon discovered that his ideas as to what a film should be and those of the Film Company were very different. Therefore, before he left America, he managed to raise enough money to enable him to start off on his own. To do this he went to Mexico, intending only to make a travelogue, but the country so captured him that he stayed on and produced thirty-five miles of film—that is, enough for a thirty-five-hour show. He wanted to come back and cut it himself, but the United States government would not let him. It has, therefore, been cut by a stranger to him, though in close connection with his own scenario. Now, let me say at once that the cutting is on the slow side, but the work entailed must have been so colossal that it is a wonder it has been done so well. The photography is superb and the dissolves really magnificent. Tisse is the camera-man and he deserves all the praise possible. The story deals with the persecution of the native peoples by the Spaniards under the regime of General Diaz, and you see something of what they went through before their revolt against his presidency. All lovers of the cinema should see this picture and even those who only like pure entertainment cannot fail to be thrilled by the life-like acting of the natives, the superb photography and the glimpse into the sad past of a little-known country'.

*Detail from a carpet discovered in Northern Mongolia, believed to date from the first century B.C., reproduced in *THE LISTENER*, August 16, 1933, page 246

Points from Letters

Owing to the pressure upon its space, THE LISTENER is able to publish only a selection from the correspondence which it receives. Correspondents are asked to write briefly and to the point, and are reminded that name and address must always be given, even where their publication is not desired. THE LISTENER, of course, undertakes no responsibility for the views expressed in these columns

Sport as an Art

One of your correspondents asserts that 'A sportsman is an artist. What he sees is the beauty of the contest', and so on. But where is the beauty of the contest in fox-hunting, for instance? A large number of hounds are set upon the scent of a small animal, who tries to escape by running and running till he can run no longer, and is then torn to pieces by the nearest hounds. A crowd of men and women follow after the hounds, incited by the desire to witness the exhausted little creature's death. For their own pleasure they inflict the most appalling form of cruelty upon a helpless animal. It is just for fun and nothing else. They do not even want to eat the fox, though I have seen a picture of a hunting parson in Gloucestershire who vowed he would eat the fox if the hounds killed him, and did fulfil the vow. I can only hope that he and his guests died of the effects, for the flesh of a tormented animal is poison. In Spain the flesh of bulls long tortured and then slain in the ring is not sold in the market because it produces insanity. If every man and woman up at the kill of every fox were given a fragment of him for supper, it would be interesting to observe whether they became more insane than before, or lost their artistic enjoyment in the sport.

Hampstead

HENRY W. NEVINSON

Pillars, Stalwarts and Heroes

I observe in the new Talks Programme the announcement of a new series of Sunday afternoon talks on great leaders of religion. We are promised three series of these, under the following headings (the italics are mine):

Pillars of the English Church
Stalwarts of the Scottish Church
Heroes of the Free Churches

Whoever devised these titles must have a natural gift of literary propriety, combined with a delicate sense of humour. Are we to take it that the words italicised imply the spiritual characteristics of the Churches to which they refer?

Pocklington

STEPHEN ADSWORTH

'Native' and 'Natives'

In one of the 'Week by Week' paragraphs appearing in your issue of December 27 you refer to an article in *The Times* relating to the native brain. Such a reference appearing in two papers published in England naturally suggested that natives of England were referred to. A further perusal of the paragraph shows that this is not so, but that the natives of some non-European territory are referred to. There is, however, no indication in your article of the situation of this territory. May I take this opportunity of protesting against the practice which I find is becoming common even among people who regard themselves as reasonably well educated, of using the word 'native' to mean a person belonging to one of the coloured races? If this practice becomes general it will be necessary to coin some other word to denote nativity.

Edinburgh

R. BALFOUR BROWN

[The writer of our note replies: Although the 'Oxford Dictionary' defines Native as 'Member of non-European or uncivilised race', we agree that a more accurate specification was here necessary and must apologise for our lack of vigilance. Dr. Gordon's experiments were carried out on the natives of Kenya.]

Vanishing England

St. Audries is a very small village, but possibly the difficulties found here are also experienced elsewhere. The Quantock Hills round St. Audries are certainly worth preserving, but most of the people are too poor to dare to risk offending anyone, and there seems to be no one with any power to whom we can appeal. The Williton Rural District Council ought to care about the countryside, but their powers seem to be strangely limited. For instance, any kind of house may be built, and after it is built the plans may be sent to the R.D.C., who admit that they then 'just pass them'. Some of these houses which have been (and are being) built are not only hideous, badly proportioned, and in bad taste, but are anything but soundly constructed. The pre-

vailing building slogan is: 'The ugly is bound to be cheap and is therefore desirable'. A dwelling-house complete with bathroom and bath may be built, and, until it is inhabited, may be called 'a store-room', and its plans need not be submitted to the R.D.C. The fact that a house depends for its water on a supply taken from a private pipe (without permission, and liable to be cut off by the owner) in any case presents no obstacle to the passing of the plans by the R.D.C.

Large brick lorry-houses may be built, with any amount of unnecessary ugliness, and quite out of keeping with woods, hills, and sea, among which they are a conspicuous eyesore. So long as the buildings (which may be large enough to hold three or four lorries besides, perhaps, twenty tons of coal) are called 'sheds', no one can have any say in their erection. Apparently anyone can put up what 'sheds' he likes.

Possibly the R.D.C. would find it easier to be public spirited (even if the builders were not) if their officials had fewer jobs. The Clerk to the R.D.C. may be also (1) agent for an insurance firm; (2) clerk to the J.P. (even when an insurance case comes up); (3) partner in a firm of solicitors, with local clients among those whose first wish is to sell as much land for building as possible. The Sanitary Surveyor may, even if he is an R.D.C. full-time official, run a business as an architect. These officials have a great deal of influence on the R.D.C., and seem to me to have too many interests. Unfortunately, the preservation of the countryside is not one.

I hold that it ought to be. Can your readers suggest what should be done?

St. Audries

K. M. RUST

Æsthetic Value of Functionalism

In your issue of December 27, Miss Margaret H. Bulley lays her finger on the weakness of functionalism 'as a criterion of æsthetic value'. In the case of the examples she cites, where teaching of the principles of design has been given along functionalist lines, surely the criticism must go to the half-garbled notions of the theory of functionalism and not to the theory itself. In brief, the teaching has fallen short. 'Fitness for purpose' carried to its logical conclusion surely includes æsthetic considerations. For discussion on this point I beg Miss Bulley to refer to the files of THE LISTENER for the report of the opening talk (itself a discussion) with a photographic illustration of steel girders, in the series of talks, 'Design in Modern Life'.

Chatham

A. PERCY FRIEND

Defining Beauty

The word 'beauty' is used to describe two very different kinds of feeling, which have nothing in common. When we are in a countryside where everything is as we have experienced it through many years of life a feeling of peace and harmony may fill the mind and we use the word 'beauty'. The other kind of beauty requires as an essential the presence of some strange distracting element. All strange elements affect our emotions, some produce fear or horror and some may produce the feeling of beauty in this second sense. Novelty is one essential factor in beauty of this second kind, whether of nature or in art, and when we live amid it for some time it loses its novelty and ceases to overpower us. Very long companionship, however, may lead unconsciously to an appreciation of the peaceful beauty of such surroundings.

The ability to see the novelty in what surrounds us depends on each individual's mind. A strangeness that produces the emotion of fear causes within our bodies certain unpleasant feelings designed to make us withdraw: the strangeness that produces the emotion of beauty in the second sense stimulates our circulation and produces the pleasant sensation which we call the sensation of beauty and excites us to remain. We are in the habit of attributing the beauty which we feel as residing in the external objects which we see; we do not, however, attribute the fear which we feel as residing in the external object which causes it, but there seems no more reason to do so in the case of beauty than in the case of fear. As in both cases it is a bodily, i.e., physiological effect produced by a strange object acting through an appreciative mind. If our minds are

not sensitive or we are in commonplace surroundings we experience neither fear nor beauty and physiologically we make no response. We feel indifference.

Pinner

E. F. S. HILLS

Clothes in Education

Many will have read with great interest the article 'A Test in Taste' in THE LISTENER of December 27. How is it so little use is made of the educational value of clothes? Why condemn children to school uniforms? Let them have the pleasure of dressing themselves and in so doing learn lessons in 'taste', 'colour', 'fitness for purpose', along with practical economy. Boys might then rebel at being cheated of that most useful, nerve-soothing handicraft—sewing. Children want to learn to live.

London, N.6

ISABEL THOMAS

Our Colour Supplement

It was certainly a fitting tribute to present copies of His Majesty's speech with the last issue of THE LISTENER, and readers were, I am sure, most pleased to have a permanent record of this simple but inspiring message. One would have expected, however, that the dignity of the subject-matter would have been reflected in the design and execution of this Supplement. One is amazed that, far from this being the case, the canons of good and dignified printing have been outrageously flouted and the whole presentation conceived in profoundly bad taste. This is all the more surprising when one recalls THE LISTENER's ardent advocacy of good, clean, unaffected type and the avoidance of the use of meretricious ornament; this Supplement should indeed be most useful for any future article to illustrate what is to be avoided.

London, W.C.1

R. SHEPPARD

The Motoring Laws

In your article in THE LISTENER on 'Gaps in the Motoring Laws' you seem to evade the question of the cruel risk which the motorist takes with his neighbour's life when driving on ordinary country roads at a fast pace. Considering this great risk, I do not see how the verdict of manslaughter can be honestly evaded. This contempt of common and Statute law on the part of coroners and magistrates means that the State has now conferred upon the motorist the right to kill.

Plymouth

ALFRED JAMES

Children and Literature

I am preparing a book on the subject of *Children and Literature*, and I should be most grateful if you would permit me the use of your valuable columns to ask any of your readers who possess interesting, curious, or amusing examples of the efforts of children at literary expression, whether in prose or verse, to be kind enough to give me the opportunity of reading and, possibly, using them. I should, of course, return any MS. sent to me and refund the cost of postage.

21 Little Russell Street, W.C.1

GEORGE GREER

'The English Gentleman'

THE LISTENER has hitherto kept up such a high standard that we regret the first article last week as more on the level of the ordinary Press. The writer does not seem to know that we English pride ourselves on finding the 'gentleman' in every class. He belongs to none: the pedigree which is regarded of such importance is found in many lands. The truth and sincerity which form the background of the real gentleman we perhaps share chiefly with the northern nations.

Birmingham

S. STURGE

Japanese Trade Competition

After reading the talks by Messrs. W. F. Sadler and C. V. Sale on Japanese trading conditions, and your comments and Mr. Sadler's subsequent letter in your issues of December 20 and 27, it appears to me that the root cause of the difficulty receives but scant acknowledgment. The root cause is monetary. Relative standards of living, the depreciated yen and the lack of scientific training in our business world are all given prominence.

To deal first with the standard of living; I suggest that for all practical purposes we can assume the British and Japanese standards are about the same. Mr. Barnard Ellinger's recent talk has some bearing on this aspect. In any case no one would wish

to lower the British standard if it can be avoided. It has been stated that a Japanese bicycle can be sold in Europe for 12s., allowing for the depreciated yen, but not for shipping charges, that is equivalent to £1 10s. How is this possible when we cannot sell one here for less than £3 or £4?

While it may be true that a higher standard of scientific training in business circles is desirable, it is the main purpose of this letter to plead the urgent necessity of applying scientific thought to monetary matters. It is suggested that Japan is granting free credits to exporters and that this is by far the most important aspect of the whole question. To make this suggestion clear—if the Japanese government, or the banks on government authority, granted a free credit of 12s., or the equivalent in yen, per bicycle, the price would appear more reasonable. The exporter would then be able to pay the manufacturer 24s. in yen, only half of which had been paid by the foreigner. The banks would accept these credits, in due course, for cancellation.

Before we judge Japan harshly we should remember that in times past we have lent credits abroad, and there is some similarity between the two methods; both supplement the deficiency of purchasing power inherent in our method of national costing; the one is a free gift, the other the loan of an unrepayable credit; both lead to forms of 'dumping', which means that the members of the exporting country work to give goods to the foreigner for nothing. The foreigner usually objects so strongly to having 'something for nothing' that sooner or later war results.

Signor Mussolini has found another method of supplementing, to some extent, the deficiency of purchasing power. The Italian budget deficits for the last three years have been £10 millions, £15 millions and £64 millions, and the estimate for 1933-34 is £47 millions deficit. Britain had to inject £10 millions a day into the monetary system in 1914-18 to keep in full production when nearly ten million of our most active workers were busy 'consuming' at an abnormal rate. The Japanese question, like many others, leads us to the first need of the day—to devise some method so that purchasing power and production shall equate as automatically as possible without checking either production or consumption. This is essentially 'national' work, although the results internationally would be far-reaching and beneficial.

Birmingham

P. R. MASSON

Report on Crossword No. 198

The chief difficulties in the third Biblical crossword were 19 Down and 32 Across with the words beneath it. TRIO is a

L	I	T	T	L	E	F	I	N	G	E	R
O	N	H	E	I	F	E	R	O	I	V	I
H	S	I	K	F	R	A	M	E	R	I	H
O	G	G	O	D	Y	R	A	I	T	S	O
R	A	H	A	H	I	T	O	P	H	E	L
S	L	O	G	A	N	I	N	U	N	P	E
E	L	D	I	S	G	R	A	M	P	U	S
L	E	A	V	E	P	O	R	A	C	L	E
E	R	G	E	R	A	V	E	L	A	T	G
A	I	A	H	I	N	O	T	I	B	U	Y
C	E	P	H	A	S	A	U	G	U	R	P
H	S	E	A	L	S	K	I	N	L	E	T

too, but demands some unacceptable alterations elsewhere.

Prizewinners: E. T. Hardman (Eastbourne); L. A. Jones (St. Albans); P. Lewis (Paversham); T. W. Melliush (Horne Hill); G. B. Newport (Halifax); B. F. Relton (Bromley); J. H. Stafford (Caterham); and Miss M. Walton (Basingstoke).

NOTES

Across—1, 5. 1 Kings xii 10; 8. Jud. xiv, 18; 17. Ps. lxxxiv, 10; 18. 2 Sam. xvi, 23; 20. Jud. vii, 18; 22. Josh. i, 1; 23. 1 Sam. xv, 32; 27. Leave(n), Ex. xii, 15; 32. Laver, 1 Kings vii, 30; 34. 2 Sam. xii, 8; 36. Prov. xx, 14; 37. John i, 42, Gal. ii, 9; 38. Deut. xviii, 14; R.V.; 39. Ex. xxvi, 14; R.V.; 40. E.g., Is. xliii, 9 and 13.

Down—3. Jer. xxxi, 19; Ezek. xxi, 12; 4. 2 Sam. xiv, 6; 5. Gen. xxxi, 42; 6. Noah, Eon (rev.); 9. Lev. vii, 9; 10. Num. xvi, 32; 11. Prov. xxxv, 15; 13. 1 Sam. xxiii, 24; 14. Sheol; 16. Cant. vii, 5 (cf. R.V.); 19. Trio, 2 Sam. xxiii, 19, 21. See 11; 24. Anag. Israel, suggested by Amos ii, 6; 26. 2 Sam. xix, 27; 28. 1 Cor. xi, 20ff; 30. 1 Kings ix, 13; 31. 2 Kings xviii, 21; 33. Prov. xi, 23; 35. Ezek. xxvii, 6.

CROSSWORD RULES

1. Entries should be on the printed diagram and envelopes containing them should be addressed to the Editor of THE LISTENER, Broadcasting House, Portland Place, London, W. 1, and should be marked 'Crossword' in the left hand top corner. 2. Clues are not normally given for words of two letters. There are no capricious traps, and legitimate alternatives are accepted. 3. Collaborators may only send in single joint solutions. 4. The Editor reserves the right to disqualify entries for bad handwriting, late arrival, and on suspicion of a breach of the preceding rule. 5. Subject to the above rules, the sender of each correct solution is given a copy of the book prize, when one is offered. Competitors may suggest an alternative book of the same price when sending in their solutions. 6. In all matters connected with the Crosswords the Editor's decision is final.

Short Story

Millennium Also Ran

By H. E. BATES

THE young reporter walked reluctantly out of the soft morning sunshine and up the half-dark iron-shod stairs which led to the office of his paper, *The Harlington Echo*. In strict truth the small bare draughty room behind the frosted-glass door at the head of the staircase was hardly an office; and he himself was scarcely a reporter. The room was in reality a disused lumber-room belonging to the wine-and-spirit merchant who occupied the premises below. It was not only bare and draughty but damp and mice-ridden, and except for two chairs placed against a small deal writing table and a waste-paper basket overflowing with torn and screwed-up papers by the fireplace there was no furniture. Back numbers of the newspaper were strewn about the floor loosely or in dust-yellowed bundles tied up with packing string. A smell of moulding paper and printing ink mingled with the vague odour of stale spirits or wine coming up from the warehouse below. Above all these was an odour of dust, old stale dust that showered down mysteriously and everlastingly like yellowish pollen on the chairs and tables and papers. It had powdered the tea-cups standing on the iron mantelshelf above the fireplace, and at times the young reporter seemed to feel it penetrating to his mind also, poisoning and deadening it. He loved the place like a mortuary.

He arrived there a little after nine each morning. He was hardly a reporter because, except for odd cases of suicide and drunkenness, a weekly routine of weddings and funerals and births and birthday parties, there was nothing to report. The office was a branch only; he was there in readiness, an outpost who might any day be lucky enough to chance upon some scandalous or tragic human calamity. He came to the office every morning with the vague hope that during the night someone had shot his wife and burned the body. Without such choice tragedies he knew that his day, from nine o'clock in the morning to seven or eight at night, would be utterly filled with boredom, his mind soured by dust and silence and loneliness.

He threw up the window and put his hat on the mantelpiece. It was early June; he could hardly bear to look out of the window at the sunshine. He had bicycled in that morning from the country and he remembered almost with pain the odour of meadowsweet, the singing of yellow-hammers, the hot strength of the sun.

Unfolding the morning paper he sat down at the table. His first job each morning was to cut the lists of racehorses from the sporting pages of a London newspaper and then paste them on a sheet of cardboard which hung by the telephone on the wall. Two doors along the street stood the offices of a rival newspaper. In the afternoon, in order to defeat the rival, the young reporter would receive the race-winners and their starting prices by telephone and then stamp them frenziedly in violet letters with a rubber-stamp on the stop-press columns of the early editions and deal out the papers to the newsboys who stood crowding on the dark stairs, deriding him impatiently. Sometimes he won; but often he checked the horses wrongly or printed them upside down and then lost. By four o'clock each day he was sick and tired with the frenzied haste and uncertainty of it all and the fear that at any moment Mathers, the senior journalist, might burst in half-drunk and storm at him.

He took the paper-scissors from the table drawer and then stopped. On the table lay a note for him, written on the back of an old ballot paper in Mathers' tipsy-looking, half-illegible handwriting.

'Go round to No. 7 Salvation Street,' it said, 'and enquire why Parker hasn't been and if he will be coming again'. And as a kind of post-script: 'Nose round a bit'

Parker was a paper-seller, a thin sharp-nosed colourless-eyed youth of eighteen or nineteen, who had failed to appear at the office for three days. Mathers must have written the note late the previous night. He came to the office rarely, making unexpected and volcanic appearances, generally in half-drunken haste and temper, a small, ferrety, bestial man, with shifty eyes that were raw pink from constant drinking and a short ginger moustache stained a dirty yellow nearest his thin lips. Both in winter and summer he wore a greasy mackin-

tosh, a dirty yellow woollen scarf and a grey shapeless tweed hat, from under which his fair hair straggled down unkempt and tawdry. He would rush into the office, bringing a smell of liquor against which the stale odours of wine and spirits from below seemed sweet, and sitting down at the table, still in his hat and scarf and mackintosh, would proceed to write with frenzied excitement, as though he had come straight from the scene of some fresh murder. As he wrote he turned constantly to spit beerily into the fireplace, muttering and swearing in savage undertones between the spits. Then he would jump up as volcanically and suddenly as he had come in, hurl some savage command or criticism at the young reporter, and clatter downstairs, leaving behind him the stench of his breath and the loathsome hiss of his spittle dropping into the fire. Yet there were times when he came in with a sort of lugubrious sobriety. On these occasions he would solemnly sit down and lecture the young reporter. He would talk on the beauty of obedience and integrity, on duty, on moral cleanliness, on life itself, speaking in a soft oily voice with the repellent smugness of a preacher sermonising, his beery pink eyes contradicting both his words and his voice. The youth's finest emotions would revolt as he listened, turning to a sickness which rose up in his throat and soured and remained there. He often could not speak for revulsion and unhappiness as he heard the suave criticisms of his conduct and work. He had come to the office in the belief that he might learn to write there.

'You want to learn to write, eh?' Mathers would say. 'You want to cultivate style? Well, let me tell you, young man, that you won't cultivate a style by sitting on your backside waiting for something to happen. How do you suppose the great London journalists find the stories that fill their front pages? By sitting on their backsides, like you? Don't stare out of the window! Listen to me! Do you suppose I'm telling you this for the good of my soul? What the hell do you expect to learn by dreaming? You must get out! Go on, get out. Now. Find something to write about. Nose round a bit. And don't come back until you've found something'.

And so, this morning, he must go out and nose round a bit. The note seemed to mean that Mathers would not be in all day, and he finished cutting out and pasting the lists of racehorses at his leisure. While the paste was drying he read down the lists and then referred back to the paper for the tips given by the racing journalists.

There appeared to be a big race at three o'clock. He read the names of the horses half aloud: Irish Green, Sea Captain, White Rose, Moonraker, Volcano, Millennium, Double Quick, Black Tulip, La Reine. The tipsters seemed to fancy Millennium, and one wrote: 'We have always known, of course, that he was an animal of sterling abilities as well as achievements, and I have no doubt that in today's race he will add further lustre to his name. One might say, indeed, that today, for once, the Millennium will arrive'.

When he had finished reading he hung up the card by the telephone, put some sheets of ballot-paper in his pocket, locked up the office and went downstairs into the sunshine.

He walked down the street, towards the sun, past the sawdusted steps of the wine-and-spirit merchants and the offices of his rival newspaper. Before he could nose round a bit or enquire after Parker he must perform his morning ritual: he must see the police and the coroner. These were, so to speak, his incubators, from which he hoped every morning that exciting game like rape and murder and felony and suicide had hatched.

But on this morning, as on most others, nothing had happened. His 'Anything doing?' at the police-station was answered by the fat sergeant at the desk with a glance at the pile of charge-sheets, a shake of the head and a quick 'Have you 'eard this one?' He stopped to listen to the bawdy story reluctantly and tried half-heartedly to join in with the sergeant's deep laughter, which went echoing in hollow waves of sound up and down the glazed brick corridors leading to the cells.

From the police he went to the coroner. The town was small,

provincial in its very odours of fish and cheap drapery. The awnings were already down over the shop-fronts. He felt with pleasure the hot sun on his neck.

He pushed open the swing-door of the dark gauze-windowed coroner's office and repeated to the youth sitting inside on a high round stool at a desk his daily formula:

'Anything doing?'

'Nothing'.

'Which is the way to Salvation Street?' he asked.

The youth put his pen behind his ear and came to the door and gave the reporter directions.

'Go through the churchyard and then past the canal. It's the fourth street by the canal. Anybody will tell you'.

He walked through the churchyard. It was nearly eleven. A bed of white pinks growing over an old grave poured out a heavenly fragrance as he passed.

He passed through the shopping streets and the sloping alleys, like rabbit-runs, going down to the river. He caught the morning smells of fish and drapery and watered dust changing to the odours of the canal-streets.

He read the name of the streets by the canal, each a cul-de-sac: Lord Street, Jubilee Terrace, Charlotte's Row, Salvation Street. The houses, squat boxes of dirty yellow brick and grey slate, had an entry to each pair, like kennels, and the railway ran side by side with the canal, bridging the streets.

He walked up Salvation Street and knocked at the door of No. 7, and after an interval and a second knock he heard footsteps and a wriggling of the unused key in the dry lock.

The door opened a crack. An old woman showed her face, looking very white and startled at seeing him there.

'Can I have a word with Mr. Parker?' he said. 'I'm from the *Echo*'.

He saw tears begin to roll down her cheeks almost before he had formed the words, and as she cried she shook her head feebly, making her tears tremble and fall quickly down over her black blouse.

He tried to say something to her and excuse himself, but as suddenly as she had begun to cry she disappeared.

Waiting, he saw through the door-crack the room within: a broken couch heaped with rags and old shoes, the bare floor-boards feet-worn and broken, the holes nailed over here and there with the lids of sugar-boxes and odd scraps of colourless linoleum; the wall-paper was ripped and damp-rotten, the largest gaps pasted over with sheets of his own paper, *The Harlington Echo*.

He was thinking of walking away when he heard the return of footsteps, and expecting to see the old woman again, he got ready to say that he had made a mistake, but the door was opened wider and he stood face to face with a young girl. She would be somewhere between seventeen or eighteen. She, too, was in black.

'Can I speak to Mr. Parker?' he said.

The cruel and foolish futility of his words struck him before he had finished speaking, and he knew what her reply would be.

'He died yesterday', she said, but he could hardly catch her words.

Confused and angry with himself, he looked straight at the girl's face in mute humility. She seemed to understand. Her face, narrow, bleak and very girlish, had a strange composure about it; she had gone beyond grief and even beyond resignation into a kind of stupidity, a sort of elevated, unemotional trance. Her eyes were dark and dry, without even the light of grief or pain, her hands hanging loosely at her side, her fingers straight and outspread, her wedding-ring gleaming bright against their pale boniness. He felt that she had said all she wished or could say. And as he wondered what to say before he took leave of her he heard the cracked sobbing of the old woman and her voice speaking from the room between the subs.

'Ask him if he'll put it in the paper'. Her tear-wet face appeared behind the girl's. 'Will you put it in the paper, eh? He was only bad three days. It'd make me that happy if you'd put it in the paper. God bless you if you'll put it in the paper'. And then:

'Would you like to have a look at him? He looks so lovely. You can come and look at him'.

All the time the old woman was speaking the girl's face was changing and hardening into a consciousness of bitterness and pain. Her eyes awoke and became filled with an icy white light of hatred for the old woman and her garrulous sobbing.

The old woman tried to open the door wide enough for him to enter, but the girl held it, clenching it with her white hand and jamming her foot against it.

'I must go if I'm to get it into the paper', said the reporter.

'Come and look at him', moaned the old woman. 'He looks lovely. You wouldn't think he was dead'.

But encouraged by the bitterness in the girl's eyes he ignored the old woman.

'Is there anything I can do?' he said to the girl.

She shook her head.

'I'll put it in the paper, if you like'.

She shook her head again.

'Oh! have it put in', moaned the old woman. 'It'd make me happy if you put it in'.

The girl was shaking her head and biting her lips vehemently.

'There may be some money to come from the paper', said the reporter.

'I don't want no money!' the girl cried.

'Oh! you silly silly!' moaned the old woman. 'Oh! she don't know what she's saying. She's all upset. Don't take no notice of her. She ain't got a penny—not a penny I tell yer. We ain't got enough to pay for a decent coffin for him. Don't listen to her'.

'If there's any money I'll send it', he said, half-walking away.

'Oh! she'll be glad of every halfpenny, I tell yer—'

'Oh! be quiet! Be quiet!' shouted the girl. 'Oh! be quiet!'

As she shouted the words she pushed the old woman furiously behind her with one hand and slammed the door shut with the other. Before moving away he heard her cries echoing distractedly in the house, mingling with the weary complaint of the old woman trying to comfort her. A woman with a wet-patched sack apron over her black skirt and a man's cap hat-pinned to her thin grey hair hurried past him as he walked down the street, wiping her soapy hands on her apron and her sharp nose on her hand. He heard her voice also mingled with the voices in the house where the dead youth lay:

'Anything I can do, my gal? Mrs. Parker, anything I can do?'

Finally he could hear no more. He walked under the railway-bridge along the canal and so back to the town. Should he put it in the paper? The scene hurt and depressed him, persisting vividly in his mind. Ought he to put it in? Wasn't this where he became a reporter? Half against himself he strung the phrases of a paragraph tentatively together. 'After an illness of only three days, James Parker, 19, yesterday succumbed to . . . Deceased, who had for some time acted in the capacity of newsman to this office, leaves a wife and . . .' The trite easy phrases condemned themselves and seemed to reproach him. He began to think that instead he would write an article, an impassioned account of the filthy house, the garrulous old woman, the tragic young wife. He would describe it all with vivid indignation and emotion, asking rhetorically if this were civilisation, if poverty were any less a crime because it was also a tragedy? In imagination he saw the article, with arresting headlines, given a prominent place in the paper, and he half-imagined an editorial comment upon it: 'We draw the attention of our readers to the report, given on another page, of what we feel is not only a sad and distressing case, but an indictment of the social conditions under which we live and for which, in a sense, we are also responsible'. His mind hammered out the words angrily. He would write a report that would stir the consciousness of all who read it. His desire to write flamed up so powerfully that he found himself walking along in an agitation of rage and anxiety.

Back at the office he sat down and took up some sheets of ballot-paper and began to write. He was ashamed when the old easy phrases began to form themselves and not the passionate words of righteous accusation he had planned. 'After an illness of only three days' duration . . . He began to tear up the sheets, trying fresh beginnings. 'Housed in a jerry-built hovel on the banks of a canal which stinks in summer and floods in winter, I today found Mrs. Parker . . .' He knew that this was too strong and he tore up the sheet, beginning again and again. At last he desisted and went downstairs and across the road to the eating-house opposite, bringing back the cup of tea which he allowed himself every day with his sandwiches.

He drank and ate a little and then, feeling calmer, began to write again. He succeeded in describing the street, the house and the conditions under which he had found the girl and the old woman living. Then, warming up to his subject, he covered several pages, eating and drinking as he wrote, his sense of time deadened.

But coming to the girl herself, he could not go on. He saw clearly enough her dumb negation, her look of unemotional immobility, and he could hear with painful clarity her voice crying reproachfully, 'I don't want no money! Be quiet! Be quiet!' but he could not put the words describing it on paper. He could not convey the sense of her grief, her youth, her unspoken bitterness. And he went on watching her face, as it were, in his mind, without being able to describe it, until he heard clumsy feet on the stairs below and the sound of the newsboys' voices talking about the afternoon's races.

He was surprised to find that it was nearly three o'clock. He put his written sheets aside and opened the table-drawer and took out the rubber-stamping apparatus in readiness for stop-pressing the results.

Heavy feet came up the stairs as he was doing so and the glass door opened. A bundle of newspapers was flung on the floor inside and a dirty-capped head appeared in the door crack and a hoarse news-voice whispered:

'Remember what I told yer?'

'No'.

'What? Didn't I tell yer it was a gift—Millennium? Ah! yer don't know a good thing when I give yer one. It *can't* lose—unless it falls over. If that ain't a winner I don't know a mare from a cock-sparrow'.

Suddenly something occurred to the reporter:

'Is it too late now?' he said.

'You don't hurt. What d'ye want on? Put your top-hat on?'

It had occurred to the reporter that he might back Millennium, using Parker's money and giving the winnings to his widow. If the horse lost, he himself would stand the loss, and

hastily he found the sales-book, checked the sales to Parker and a moment later the newsman was clattering downstairs with five shillings for the bet.

The reporter sat back in his chair to wait for the telephone call. As he sat there he played idly with the rubber-stamp and its letters, setting up Millennium and printing it on the blotting-paper. In imagination he saw the girl's face as it would be if the horse won, contrasting it with the grief-stupid tragic mask he could recall so perfectly but could not describe. And suddenly he remembered also the vehement shaking of her head in reply to his, 'I'll put it in the paper if you like', and he suddenly seized the sheets he had written with so much struggle and tore them up.

His heart leapt as the telephone rang. As he stood with the receiver to his ear, waiting, he could hear the hush of the newsboys as they listened on the stairs.

A voice on the telephone gave him the horses. He wrote them down before the consciousness of his failure struck him: 'Volcano, Double Quick, White Rose'.

He repeated them and put up the receiver. A moment later the newsboys were crowding at the door, he was setting up the type in the rubber stamp and stamping the horses' names in violet letters in the stop-press columns. Voices clamoured and swore and urged him to hurry. He stamped frenziedly and dealt out the papers. Excited feet clattered noisily on the iron-rimmed stairs. 'What won? Volcano. Millennium also ran. Volcano won. Millennium also ran'. Little by little the voices faded away downstairs.

When the last of the papers had been stamped and dealt out he sat alone. The voices crying the papers came up from the streets outside, rising and falling, shrill and inarticulate. He had never been able to tell what they said. Now though he listened carefully their words still eluded him. And he sat there long after they had died away, the memory of their inarticulate sound persisting in his mind like the clamour of voices crying to be understood.

Clear Thinking on Industrial Problems

The Logic of Industrial Organisation. By P. Sargant Florence. Kegan Paul. 10s. 6d.

I HAVE A GRIEVANCE against Professor Florence, and had better get it off my chest at once. I can imagine many of the very people who ought to read his book from cover to cover sticking at some early passages and putting it down quarter-read. There is a sort of book in which it is not only harmless but necessary to say such things as:

Efficiency is indicated by the amount of return (or product) obtained at any given cost, the precise relation being either a ratio (where efficiency is greater or less according as the return divided by cost is greater or less) or a difference or 'margin' (where efficiency is greater or less according as return *minus* cost is greater or less). To be efficient thus means that either the average return or the differential or marginal return is high (page 12)—

—but this book is not one of them. Yet beyond this sort of thing lies stuff that no one who has a serious interest can afford to miss; illuminating analysis, shrewd comment, challenging criticism, a study of British industrial organisation that makes informative, provocative, stimulating, and engrossing reading.

In his quest for the logic of what one loosely calls 'mass production' Professor Florence distinguishes between large-scale production and large-scale organisation. The great firm making an endless variety of things may easily be beaten by the little firm making long runs of one or two standard things. Efficiency, he contends, lies in the specialisation of firms or plants upon one or a few standard commodities produced in large quantities. As with production, so with selling: the standard-line shop or store-department is beating and will beat the shop with a little of everything. There must be a plan and a policy for industries as a whole. If unrestricted competition prevents that, the official restriction of competitors by a system of licensing might be considered; but better the ultimate victory of the large-operation firm, or a combination of firms each specialising in one product and associated for marketing. This is the policy known as rationalisation. It brings with it a danger of monopoly, and may call for public control or even ownership. Costly plant should be worked long hours, so as to reduce overheads; but it is stupid to have some people working long hours with no time to enjoy their earnings while others have complete leisure with no income to spend. The remedy lies in working short multiple shifts, which would distribute the shorter hours over a larger labour force. The advantages of large-scale operation may be lost unless the internal organisation is properly arranged from the standpoint of sound industrial government.

The old symmetrical pyramid of authority, descending from the great chief at the top down through managers and superintendents and foremen, will no longer do. Nor will the Taylorite plan of entire direction and control by 'functional' experts suit the British temperament. Professor Florence plumps for that combination of the two known to the military as 'line-and-staff' organisation. The control of industries by semi-independent public commissions or corporations need not be less efficient than control by joint-stock companies, which are not free from a tendency to red tape and Safety First. It all depends on the building up of a real political science of industry, and on the training of people in that science. The notion that personal enrichment is the one incentive to efficiency must yield to a recognition of the wide variety of human incentives (and 'conducives': an excellent term). The non-monetary rewards of a business career must be more clearly seen and presented in educational circles; and education must be shaped accordingly.

The argument and the conclusions are so sound and sensible that, having vented my grievance earlier on, I am left without objections or criticisms; but there is one point sticking dangerously out of Professor Florence's pages for which, assuming the role of factory inspector, I would like him to provide a guard. In Chapter IV he seems to accept the view that if orders are falling off, one way in which employers can meet the situation is by cutting down costs and prices in the hope of keeping up output and sales. Now that can be an effective way for one industry or for one firm against others; but let the cutting-down spread, and down slides the general price level; and the deplorable course of post-War affairs has taught us that when buyers turn shy and hold off from buying, the worst possible thing that can happen is for producers to try to overcome the reluctance by lowering their prices. Must not industrial policy, as much as financial policy, aim at steadying the price-level instead of leaving it at the mercy of gushes and dry-ups of demand? Yet the prices of some goods, relative to others, must on occasion come down, notably when and as industrial efficiency improves. Evidently there is virtuous price-cutting and vicious price-cutting. The logic of industrial organisation requires that the one sort shall be prevented and the other shall be reconciled with an all-over policy of price-stabilisation. I hope that one of these days Professor Florence will turn his powerful headlight on that at present dark spot.

JOHN HILTON

New Novels

Magnus Merriman. By Eric Linklater. Cape. 7s. 6d.

Bredon and Sons. By Neil Bell. Collins. 8s. 6d.

Night over Fitch's Pond. By Cora Jarrett. Barker. 7s. 6d.

Reviewed by EDWIN MUIR

THE traditional conventions of fiction seem to have an infinite capacity to renew themselves. Ten years ago no serious writer would have considered the picaresque romance a possible form; within the last few months two picaresque romances of high interest have appeared: Mr. George Beaton's *Jack Robinson* and Mr. Linklater's *Magnus Merriman*. The picaresque novel is inseparably connected in people's minds with the eighteenth century and the life of the eighteenth century; it was the natural form which any comprehensive description of society was almost bound to take in that age of difficult and adventurous travel; and if Fielding and Smollett—Smollett in particular—piled on the adventures somewhat lavishly, that was at most a statistical and not an artistic fault. Sterne, with his daring and ingenious mind, and sedentary disposition, discovered a novel technique for bringing all the world to his slow-motion heroes instead of sending them out to brave the roads, and inaugurated a kind of novel which has only been developed in our own time, setting also a standard for it which has never since been surpassed. The train, and rapid and easy communication, killed the picaresque novel as a major convention; it has now become what is called an art form, but it is capable of being a very interesting and suggestive one. It can still evoke more concisely than any other literary means a sense of the surprising vicissitudes and contrasts of life, and handled seriously it is a witty shorthand substitute for the full-length realistic novel, which is at present dying a lingering death.

Mr. Beaton's novel went to pieces half-way through and fell into two halves of unequal but striking quality. Something of the same kind has happened to *Magnus Merriman*, and the first half is considerably better than the second. The theme of the story is magnificent, if one may assume that it is stated in Mr. Linklater's generalisation about his hero in the first few pages: 'In his fortune there seemed, ever and again, to be an element of buffoonery that would trip his heels whenever his head was highest, and lay clownish traps for him in the most serious places. He adventured for a medal and had his stripes cut away; whenever he played Romeo he tripped over the chamber pot; and his political hopes were to be spoiled by a ludicrous combination of circumstances'. One can see what wonderful comedy an idea such as this would be capable of producing, and for a while the comedy is abundantly forthcoming; a series of most ingenious traps are set for the hero. But then Mr. Linklater's invention begins to flag. There are amusing scenes in the second half of the book, but nothing to equal the brilliant opening, the two great dialectical contests, each ending in gaol, between the hero and his friend Meiklejohn on the respective merits of Shakespeare and Racine, and the incident of the snuff and the saxophone. These scenes are as good as any that Mr. Linklater has invented; they carry one away with their extravagant humour and wild spirits; and if the same level had been kept throughout *Magnus Merriman* would have been a remarkable book. As it is it has all the uncertainty of an improvisation; one feels that after the description of the electoral campaign is over the author does not see very much farther before him than the reader does, that he sets down, sometimes rather desperately, whatever occurs to him, and that he has ceased to believe very much in his characters and what happens to them. This is the main fault of a book that in many ways is remarkable; a less serious, but annoying one, is an indulgence in fine language for its own sake. Every now and then a cave of the winds engulfs the reader, and he is suspended there in a dazed and deafened state, wondering what has become, amid this sudden tumult, of the action. Mr. Linklater's description of Edinburgh is such a deafening hiatus, and there is very little sense to be made out of such sentences as: 'Or, from the Craigs, where the smoke of a thousand chimneys blows like a banner, or flaunts itself like a blue forest, or dances like snakes, or grows like a dim tide-waving seaweed in an upper calm, then the roofs below might be the houses in a town that Hans Andersen built, and witches live there, and broomsticks have a moonward bent, and children go hand-in-hand by the signpost of the Three Wishes to fantastic adventure'. On the other hand when Mr. Linklater develops a richly burlesque situation, such as that of the snuff and the saxophone, he puts

his virtuosity to magnificent use, and his description of the hurricane of sneezing that swept over the respectable Edinburgh ballroom is invested almost with grandeur by the resources of his vocabulary and his rhetorical skill. With all its faults *Magnus Merriman* is the work of an original and vigorous mind; it is not continuously delightful or amusing, but it is only occasionally dull; and it is well worth reading for the exhilarating extravagance of its best scenes.

How well Mr. Linklater writes becomes very clear when one turns to the next book on the list. *Magnus Merriman* is written, sometimes over-written; but of *Bredon and Sons* the best that can be said is that it is put together somehow or other. Such a complete absence of distinction or individuality of style has almost the effect of a deliberate achievement. 'She sipped her tea, however, with *slow enjoyment* and watched with *amiable complacency* the *vast appetites* of her husband and sons make *gratifying inroads* upon the food she and Mary had spent most of the afternoon in preparing'. (My italics.) That is not an unfair specimen of Mr. Bell's style, and the book contains over 200,000 words. It has scenes of considerable intensity, but the quality of the style never alters. The following is from a love scene:

'... We Bredons are part of Senwich and Senwich is part of us. Can't see myself leavin'. Be like cutting off a lag. D'yew like Senwich?' 'I like it better than any place I've ever been in', gravely.

A long minute passed before he spoke again. 'Like it well—' he began, 'like it well—' hesitatingly and then plunging, 'Well enough to live in?' And then before she could reply he stopped in his walk and, turning, faced her, putting his great hands on her shoulders, holding her at arms-length and looking steadily into her face. 'I love yew', he said, his voice harsh with emotion. She made no reply, but looked up into his stern dark face and smiled.

In this style Mr. Bell tells the story of three generations of Bredons, beginning in the middle of last century and ending in our own time. The plan of the book is impressive, and also the author's capacity to go on relating without any mark of fatigue the life stories of a succession of characters with none of whom he seems to have more than a bowing acquaintance. His characterisation has no intimacy; his dialogue is trite; and the dramatic scenes are, with one or two exceptions, tame. The book is a perfect example of a whole class in which quality is cheerfully sacrificed to largeness of design; and one could almost deduce from the style that Mr. Bell is not really interested in his characters and their feelings, but solely in his plan. He brings his creations into the world, marries them off and arranges their funerals with what appears to the reader the most callous composure. Or rather he makes them appear to be born, produces a distant impression that they live and die, but in such a cold and perfunctory manner that one can only note his words and pass on. He says nothing illuminating about any of the characters who make up his three generations. And although the reader has no right to expect illumination from every novel he chances upon, a book such as this should provide, one feels, some extraordinary justification for being almost thrice as long as an ordinary one.

Night over Fitch's Pond has the same fault as *Bredon and Sons*: that it is written in a style which cannot convey in their purity the feelings, passions, situations, thoughts that the author attempts to describe. The words fit the matter roughly, like a suit that is neither ill- nor well-made; but that is all; and the effect is slightly dowdy. The problem with which Miss Jarrett deals in her story is at once simple and complex, like most psychological problems; and she increases its difficulty by her method of treatment. She puts the story in the mouth of one of the actors, and begins with the denouement, which the succeeding pages have to disentangle. The disentanglement is effected by a succession of veiled hints and mysterious nudges which are designed to render the original mystery still deeper; and the result is that when light dawns at last it has the bathos of an ordinary workaday sunrise. Many of Miss Jarrett's observations show sensitiveness; but she is more concerned to impress than to remain true to life; and the theme she has chosen seems to be too difficult for her present powers. It shows, however, that she does possess considerable powers, and is probably an earnest of better work to come.

THE CHARM OF WRITING

By EDWARD ANTON

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(13) SIR JAMES BARRIE

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The Listener's Book Chronicle

Swift, or The Egotist. By Mario M. Rossi and J. M. Hone. Gollancz. 16s.

THE VALUE OF THIS interesting book is greatly lessened by its pretentiousness. In an introduction of some thousands of words, entitled, 'Paradox on the Egotist', the authors label Swift as 'the typical egotist' and elaborate a private idea of their own to the effect that 'the egotist, the integral egotist, has no aims'. Having committed themselves to the theory that Swift had no aims, they are naturally embarrassed whenever they have to show him acting under the influence of love or ambition, and waste much space trying to persuade the reader that Swift, as a typical egotist, was not really acting under the influences by which he appeared to be affected. But sometimes their sense of reality overpowers their theorising, they forget Swift the Robot, and are overwhelmed by Swift as a human being. 'A ravaged monument of greatness and sorrow' they cry in one such moment, 'our better because our brother'.

In addition to inventing a special meaning for the term egotist, the authors claim to have discovered 'on the whole a new method of biography'. This new method turns out to be nothing more startling than consulting the works of a writer for light on his character. They add that biography being for them 'a knowledge which presupposes an insight into the deeper reality of personality, and culminates in a statement of universal significance, endowed with rational necessity', they cannot be fettered by 'the obvious pattern of chronological succession'. After this one would expect them to begin with the death of Swift and work back to his birth, or even ignore the tedious irrelevance of dates altogether. Actually they follow the chronological sequence of their subject's life with the sensible docility of the ordinary biographer. The reader who has patience to penetrate all this fog will find, among other good things, an acute and convincing analysis of Swift's relations with women. It was, the authors suggest, his treatment by Varina (Jane Waring) which largely conditioned his curious attitude to Stella and Vanessa. Varina did not take his passion seriously. She treated him much as Fanny Brawne treated Keats, and he reproached her as bitterly as Keats reproached Fanny. 'Only remember that if you still refuse to be mine, you will quickly lose, for ever lose, him that is resolved to die as he has lived, all yours'. This outburst alone disproves the general view that Swift was incapable of love in the ordinary sense. Where he differed from most men was in his determination not to be humiliated a second time. After Varina he was on his guard, and left it to time and propinquity to involve the woman too deeply for her to be able to play with him. The reason he deferred his marriage with Stella, the authors argue persuasively, was not any abnormality in his feeling for women, but a simple desire to establish himself in politics before he appeared in London with a wife of no social position. The 'little language' he used in his letters to her has been interpreted as a sign of arrested development by some critics, but Mr. Rossi and Mr. Hone do not take the strange view that baby language implies a deficiency in passion. In their opinion the relations of Swift and Stella were those of man and wife long before the marriage, which they believe to have taken place when Swift was nearing fifty. Swift's affair with Vanessa is also submitted to a commonsense examination, and the obvious meaning is attached to Swift's retrospective reference to its 'two hundred chapters of madness'. The excision of one-third of this book would facilitate appreciation of a valuable contribution to the understanding of Swift.

Active Anthology. Edited by Ezra Pound

Faber. 7s. 6d.

Mr. Pound claims to present 'an assortment of writers, mostly ill-known in England, in whose verse a development appears or in some cases we may say "still appears" to be taking place'. In his preface (an entertaining defence, in Mr. Pound's impatient manner, of his programmatic pamphlet, *How to Read*) Mr. Pound claims (and his ten contributors would agree) that 'without constant experiment literature dies'. Mr. Pound as a poet is in no danger of lapsing into a tempting but meretricious rhetoric nor is he, as critic, likely to confuse literary appreciation with the indulgence of intellectual curiosity, but it does seem that, as editor, though he makes no extravagant

claims for his contributors, he is sometimes inclined to allow the energy of experiment and the honesty of the transcription of experience to outweigh the triviality of the experience itself. To an English reader, at least, Mr. Zukofsky's poems, complete or in parts, remain ingenious cold-blooded imitations of forms derived from another art. On the other hand, Marianne Moore's devices, as readers of her *Observations* will recall, admirably express her moments of acute perception: her avoidance of verbiage and rhetoric is particularly appropriate in her description of a seaport and its people, a subject which might easily have led to an excess or misplacement of sentiment:

Dürer would have seen a reason for living
in a town like this, with eight stranded whales
to look at; with the sweet sea air coming into your house
on a fine day, from water etched
with waves as formal as the scales
on a fish.

William Carlos Williams (still Imagist, two words to a line), T. S. Eliot ('Fragment of a Prologue'), E. E. Cummings (Translation of Louis Aragon's very notable 'Red Front', and parts of a not-prose Russian diary) and Mr. Pound himself (snippets of the 'Cantos') are among the authors included. None, as they are represented here, are as impressive as Mr. Pound himself. The most striking among younger contributors is Basil Bunting, who develops in the English rather than the American tradition and writes effective ballads for a Northumbrian emigrant as well as Cantos in the manner of Mr. Pound. In using historical themes he is less naive than Mr. Pound, who is surprised, in a way an Englishman would not be, to find that human nature has been much the same in other times and places. Mr. Pound sometimes expects, with his juxtaposition of contrasting, yet corresponding, scenes and situations, a shock of surprised recognition which is scarcely likely with an English reader.

None of Mr. Wallace Steven's rather remarkable poetry is included, and the work of Mr. Ronald Bottrall is also omitted.

Reconstruction. By Harold Macmillan

Macmillan. 3s. 6d.

Mr. Macmillan is more than a writer of an economic discourse. For ten years he has been an active politician, contesting Stockton-on-Tees in 1923, when he failed to be elected by less than one hundred votes, winning it by a substantial margin in 1924, losing his seat by a narrow majority in 1929, and recapturing it in the grand manner in 1931. He is now, perforce, ceasing to be a 'promising young member'. Yet his public usefulness and independence of outlook would, under a wholly logical electoral system, entitle him to immunity from the caprices of elections. He is neither a purveyor of platitudes nor a salesman of slogans. Nor is he one of the gallant company who are valiant only in the wielding of a fountain-pen. His speeches in the House are original, courageous, and unspoilt by the circumpect orthodoxy so carefully observed by the best 'partymen'. Another quality in his writing is his careful avoidance of rhetoric. Oratory commonly creeps in when politicians take up the pen. Mr. Macmillan is extraordinarily free from it. Indeed, one who had no knowledge of his capacity as a speaker might reasonably but inaccurately infer from reading *Reconstruction* that a speech from the author would contain moments of dullness. It is a closely argued treatise, always ready to yield up its meaning, but needing sustained concentration. Once or twice the orator obscures the essayist, but the result is both welcome and brilliant. In the last chapter, when he repudiates any sympathy with Fascism and Communism, Mr. Macmillan lets himself go and nobody's attention will wander for a moment. 'When the intellectual and cultural expression of every individual has been prostituted to the service of a vague mysticism called "the cause", beaten out of them with rubber truncheons or sweated out of them in concentration camps; when the school curriculum has been "cleaned up" and children taught to salute rather than to think . . .'. A mere searcher after literary excitement would wish for an extension of Chapter IX.

Mr. Macmillan advances a plea for a definite industrial policy based upon the hypothesis that war and civil disturbance do not intervene. Does Mr. Macmillan himself actually anticipate either of these calamities? We are not told and, in this volume, we are not entitled to an answer. For the overriding problem of

today is beyond the scope of his investigation. 'Planning' is the core of Mr. Macmillan's solution, a planning which shall regulate the flow of production to the public demand. He disarms a certain type of ready criticism by pointing out that 'planning' was undertaken long after the Italian and Russian revolutions were completed. Each industry or group of industries is to have a National Industrial Council charged with the duty of co-ordinating the various activities of the industry to effect the 'highest possible unity of policy'. Each industry is to be self-governing. To the possible objection that this proposal will involve a multiplicity of bodies, the author replies that only slightly over 100 councils would be necessary, whereas there are 1,850 Local Rating Authorities and over 600 Members of Parliament. Each Council would be represented on a Central Economic Council which would constitute an Industrial Parliament. To these representatives would be added those who could act as the spokesmen of Banking and Labour, together with the Executive heads of the Import Duties Advisory Committee. This organisation would exist to advise and assist but not to replace Parliament. A number of facile preconceptions as to cost and price are examined and exposed. 'Mere bigness does not necessarily reduce production costs'. Apprehensions about monopolistic powers are allayed. Moreover, 'we escape the danger of bureaucracy, for . . . the system would work as a self-balancing mechanism governed by the indicator of price'. A valuable chapter on Foreign Trade is illustrated by some very serviceable tables and summaries. 'Our need to buy foodstuffs from abroad is, to put it moderately, no greater than the need of foreign countries to sell them to us'. It is then pointed out that when the slump of 1931 was most intense the average prices of imported foodstuffs fell far below those of our exports of manufactured goods. Tariffs and quotas do not by themselves regulate the volume and distribution of imports. These two factors need the guidance of some controlling body. Before the last chapter, to which reference has already been made, Mr. Macmillan deals at some length with the place of Labour under his suggested system. Trade Unions should correspond with the National Councils represented upon the Central Council. No industrial stoppage would be permitted till the Council had published its proposed solutions. But Mr. Macmillan prefers, and we think rightly, the remoter possibility of strikes and lock-outs to the coercion of Socialism or Fascism.

This outline of so compact a book is inevitably sketchy and imperfect. Perhaps any accidental injustice may be mitigated by an invitation that it should be not only widely read but closely studied. Frankly, it is too serious a contribution to be overlooked by any except the votaries of a discredited *laissez-faire*.

Leonardo da Vinci the Artist. By Edward MacCurdy Cape. 10s. 6d.

In the preface to his book Mr. MacCurdy quotes Oswald Siren's statement: 'No one can be indifferent to Leonardo'. Be this as it may, it is difficult to define Mr. MacCurdy's interest. All one can say is that it does not appear to be evanescent, since the present volume is Mr. MacCurdy's second work on Leonardo. The puzzle of the author's interest in his subject remains right up to the last page. He has no theory about Leonardo: in fact one can search the book for a single idea or a single imaginative suggestion. At the same time, this is not a particularly learned work of reference full of novel attributions or archival discoveries. It does not contain an index even. The aspect of Leonardo of which this book is supposed to treat is his artistry: yet Mr. MacCurdy has made only the most superficial attempts to put Leonardo in relation to his contemporaries or to define his place in art. In a word, this book is written by one who understands no more than a little about art. All of this is unfortunate for Leonardo, especially if the reader, in spite of Oswald Siren, is indifferent to Leonardo before he starts to read. The idea of 'the universal man' is not bait that draws everybody. No one can deny that Leonardo was a genius: but he was also the arch-dilettante, and in those works, other than his superb drawings, which he did manage to complete, he displays a certain deep-rooted equivocity of temperament that is not congenial to all tastes. At any rate, we demand in a book on Leonardo, as in books on all other subjects, at least one sentence that fires the imagination.

However, let us suppose that it is a Leonardo enthusiast who opens Mr. MacCurdy's volume. He will read first of all a well-documented account of the records concerning Leonardo's movements and commissions up to the year 1493. But it is not

easy reading. Thus: 'On the tenth of May, 1488, Leonardo obtained the return of his model on condition of restoring it if required. On the seventeenth he received money on account for the expenses of constructing a second model, but of this there is no record'. 'Of the second model', presumably, but only presumably. Throughout the book, even the simplest statements of facts are often described in sentences whose exact meaning and grammar are apt to be uncertain. It is, therefore, a most tiring book to read. The subsequent chapters deal with the Sforza statue, more records, early biographies, and finally, the pictures themselves and the drawings. These chapters certainly contain much information, and it is conceivable that, as yet another handbook on Leonardo, Mr. MacCurdy's volume serves some purpose: it is not to be recommended, however, to those whose interest in Leonardo is in need of stimulation.

Three Cities. By Sholem Asch. Translated by Willa and Edwin Muir. Gollancz. 8s. 6d.

Despite the obvious faults of long-windedness, of old-fashioned presentation and the frequent use of cliché phrases, this book is one which cannot fail in significance for readers of the present day. Its gigantic theme, which rises in the latter chapters to a crescendo of pity and terror, presents the Russian Revolution as experienced by the flesh and spirit of the Jewish race. This tale of three cities, Petersburg, Warsaw and Moscow, is of the Jews, written by a Jew, and has, in the intimate and shamelessly self-revealing quality of its expression, a racial flavour which to the Gentile may often become repellent. Yet, despite this quality, and perhaps, in the end, because of it, the theme of the essential communism of the Jews expands through all the eight hundred and sixty pages and demands, through the vivid reality of its suffering, an indignation, a sympathy and an admiration, and bestows on the reader himself, by virtue of the new sense of proportion that must follow, a steadying of the soul.

Two themes, one personal, one collective, interlock and enhance one another, and both touch directly on the Jewish problem, which was never more acute than at the present time. A deep sense of inferiority and indeed an actual state of inferiority are patent in Zachary Mirkin, the son of a Jewish millionaire. This man, who is the chief character in the story, is described as such an one 'over whom women loved to pour all their maternal affection . . . a sort of well at which women quenched their thirst, not for a lover, but for a child'. And his experiences in this character, as the eternal infant, are such as provoke a sense of shame even in the reading. He is the idealistic, soft, boneless Jew *par excellence*, and is endowed by the author with the characteristic weaknesses of his race. What is significant and heroic in his story is his intelligence and unflinching sincerity; by these powers he strips from himself the burden of his fate, and in no other way than by accepting it. In the first part of the book his relation with his fiancée's mother appears as written too close to the Freudian formula, and is therefore not quite convincing. Through the acceptance of the incestuous relation he is freed in part from the false values that have surrounded his childhood, and so, in part, freed from the spell of his dead mother. Later, life strips from him other sheaths of his personality, one after another. At each step he rises to a new idealism, and each in turn leads back to the primal longing for protection. In process of this development, he renounces his inheritance and accepts Communism as his ideal. He rises to a place of distinction in the October revolution, but this also must be in turn renounced, and in the end he escapes a beggar and fugitive over the Polish frontier. By this time his individual experiences have become one with the race, and his life is no longer single but representative, and representative of more than the Jewish race but of the whole of suffering humanity. The fetishes of ideas are cast aside, and he discovers that it is not ideas that are good or bad, but men. He renounces the unthinking courage which comes from the mob, and which is unconscious of individual fear. Fear he recognises as the divine spark, the mark of man's developing ego: of fear he says:

So long as fear remained in our blood, man was a genuinely human, religious being who created good for himself and knew love and humility. It was only in course of time, when the divine element in him was suppressed by devilish fetishes that wars arose, usurpations, and the inevitable sacrifice of the weak and helpless. And to restore the equilibrium of the world, to recover the supremacy of Love and Goodness, the first thing needful is to rouse again in humanity that divine spark—the feeling of cowardice and fear.

Thus he stands utterly reduced and simple before one of the last and greatest of questions—the need to feel the individual self when it awakes conscious of itself and of the terror and pity of human existence. In such deep questioning as this the author finds his significance, despite the obvious weaknesses of style and an often tedious prolixity.

Whither Britain?

(continued from page 44)

work in which we live—are most urgently in need of world organisation.

Let us consider the matter of money. It is a very urgent trouble—the money trouble—and President Wilson's League at Geneva provides no means whatever of dealing with it. Money, as we all know too well, is a measure of obligation and value, but unlike all other measures it varies from country to country and from day to day. No other measure does this. So many metres in France or Germany mean so many yards in England or America, so many pounds in Britain mean so many kilogrammes in Spain; a mile means just the same distance always in any other measure of length you like to take—and if an English cotton merchant undertook to deliver so much cloth to a French costumier and sent him short length and declared that he did so because the yard had gone up and the metre down, we should call him a rascal plainly and conclusively. But directly we come to money, matters are different, and if a man in America owes me money in dollars I never know until pay-day comes how many pounds I shall get from him. There are reasons why this state of affairs in the monetary system should have come about, but there is no invincible reason on earth why it should continue. There is every reason why it should end. It is a common nuisance. It scarcely mattered at all in the distant past. It hardly mattered throughout the nineteenth century because of certain happy accidents of gold discovery which kept the monies steady. But now it does matter—vitaly. We have to adjust money throughout the world to the needs of world production.

Money adjustment alone will not solve the riddles of our present economic dangers. It would still leave us with the other mighty riddle of under-employment due to increasingly efficient production, and with various lesser riddles untouched, but I cite it as the simplest facet of that great problem of modern economic reconstruction which lies largely outside that world of antiquated political ideas in which the League was begotten. In the end this trouble of business confusion, which centres now upon money, is more serious even than political stresses and the danger of war. It has a warfare of its own. All the great economic communities of the world are fighting desperately now with tricks of inflation and so forth, with tariffs and shipping laws and restrictions upon trading and a multitude of such devices to shift the steadily increasing burthen of distress one to the other. We are beginning to understand that in the long run this economic bickering may be even worse for our race than the wars, even mechanised modern wars, with tanks and bombs and gas complete, with which we are threatened. It leads less violently, but more inevitably, towards disorganisation, starvation and complete social disorder.

Now let me point out to you that already a conscious planned fight—no, several fights; that is the pity of it—are being made against this immense economic breakdown. Men do not intend to take disorganisation and ruin without a struggle. And that fight is not being waged by that little sham world parliament at Geneva; it is being waged most plainly and conspicuously in two great economic communities that have no voice at Geneva, the United States and Soviet Russia. In both, bold and revolutionary efforts are being made to put economic life on a new footing, before it is too late. We too, we British, are being dragged against our will, out of our traditional apathy and self-confidence into a parallel effort. Together these three great economic systems, America in reconstruction, Soviet Russia in reconstruction and Britain awakening slowly to the need of reconstruction, are of such a magnitude, that the outcome of human history depends very largely on what they do or do not achieve.

I want to say something very plainly about Soviet Russia. We are so easily misled by superficial appearances, outworn phrases and out-of-date disputes, that one of our greatest difficulties in life is to recognise essential identities even when they stare us in the face. These two great systems to the West and the East of us respectively are trying in their different ways to construct a planned and controlled economic society on an immense scale. They start from widely different starting points and widely different fundamental ideas, they use different phrases, but their common end is a planned and controlled economic society. Never mind how the new phase in Russia began. The vital thing is *what they are trying to do there now*.

We British also in our more confused and reluctant way are facing up now to the same phenomena of social dislocation, and

we shall find the forces with which we are dealing will carry us on to the same end of a planned economy. In the end we shall find ourselves forced towards a quite parallel effort to plan and direct our own monetary, financial and industrial life. And what we need to realise is that big as these three systems are, overwhelmingly big as they are in comparison even with such mighty systems as the Spanish-speaking world, Japan or Central Europe, none of them is sufficiently big to solve the economic riddle of mankind alone. At present there is a disastrous difference in phase between what we British and President Roosevelt and the heads of the Soviet system and the other economic systems, are doing. We are all making trouble for each other and wrecking the other countries' plans. At one moment we abandon the gold standard and kill a vast amount of French trade and industry. At another the dollar falls and European exports stagger. Then Japan, with a depreciated currency, launches an attack far graver than warfare against European commerce. Although the failure of President Roosevelt in his heroic effort to rally American economic life would mean disaster for all the world, there is not the slightest sign of any real attempt on the part of our present responsible leaders to co-operate with him or understand his aim and methods. Bold and great as his schemes are, I do not believe he can carry them out if he has to carry them out in the United States alone. And the first clause of my answer, therefore, to the question, Whither would I have Britain go? is—towards at least an understanding and participation and identification with the American experiment and if possible—though that I admit is more difficult—an understanding with the Russian struggle. Consider only one thing, consider what it would mean for the whole world if the dollar and the pound could be adjusted and held permanently at a definite relation; that is to say if they could be fused into one money—with so many dollars to the pound, just as there are so many shillings to the pound, and if, further, the economic planning organisation of America could be brought into a still ampler Board of Control for the economic rehabilitation of all the English-speaking communities, and if all the speculation, smart conflicts of interest and endless difficulties that arise out of the monetary see-saw between dollar and pound could be cut right out of the human problem.

Suppose it were possible to create a Trade and Money Board for these two vast systems, a Board set up to ensure a common money, organise our credit controls into one system, agree upon common minimum conditions of labour and a common industrial rationalisation. It need not be very different in its nature from that National Recovery Board set up by President Roosevelt, only it would be broader, because it would be dealing not with the affairs of one great system but of two—or even three. It would be possible to make such an overriding Board open to the adhesion of other economic communities. The gravitational attraction of such an economic board of control might prove irresistible. Once the American and the British system got together into that much co-operation it would not be many years before that Trade and Money Board I am imagining became a Trade and Money Board for all the world.

Those other wider common interests of Trade and Money, I hold, might still be dealt with almost outside the old political methods. They have grown up independently outside the old game of sovereign states, the old game of annexations and boundaries and the like. Those sovereign states and all the old politics of separate nations and wars and policies and treaties which loom so large at Geneva are as old as the hills and fit our new occasions less and less. But these two main things I am talking about here, the increasing interdependence of all human beings through world trade, and the need for a common money, are new things in human experience. Why should we work then through the old political institutions? For new needs, new machinery. For world-wide needs, world-wide machinery.

Am I being impossibly extravagant in this suggestion that we should do all in our power to *merge* the control of economic reconstruction—of financial and monetary affairs—first of the two great English-speaking systems and then of one or two of the other great economic systems in the world, under one great planning board? Is that Utopian? That is for you to judge. I consider I am talking the plainest commonsense, and I cannot avoid reminding you that once or twice in the past I have been a successful prophet.

And if we British are not going to fall in and play a leading part in such a world-wide constructive effort, then I ask you,

where do you suppose this frightful economic jangle, this game of beggar-my-neighbour in which we find all the states of the world engaged, will end? Are we British just to look on—on the chance of filching some mean advantage out of the difficulties and conflicts of other peoples? Just digging ourselves in, in a state of fright and cunning self-protection, while the other great peoples take the risks and try the big things? Are we English going to do that? I had rather see England perish out of the memory of mankind.

And now let me turn round and look at something quite different from money and trade. Let me call your attention to certain odd possibilities that aviation is thrusting under our noses. Successful and profitable aviation *must* be international—it cannot be run on national lines. This should be particularly evident to British people. There is no way out of Britain by air except over foreign territory. It calls for no generosity on our part to admit the need of an international control of flying—a board of air control. We cannot keep ourselves in the air without it. International control, world control, is demanded, if anything like an adequate use of this great gift of invention, flying, is brought to the service of man. Quite as imperative now, as the need for a World Money and Trade Board, is a World Airways Board, to regulate air traffic, and to police the air. There is no other possible way—if the air is to be anything better for mankind than a medium of murder and disaster. A common board of control for all the air-minded nations. A common air police. And all that will follow from our having a common air police. What is Britain doing about that?

Now, had I the time, I could go on to point out the necessity for a third great World Board, a Health Board, and the facility with which such a board might be created again—not through that parody of a parliament at Geneva but by the frank co-operation of the five or six great powers vitally concerned in this

question. Make no mistake about it: with all the coming and going there is in the world today—and with no proper controls—the world-wide diffusion of some great pestilence, a new cholera, or a new influenza, is only a question of time. Health also is now a common interest crying aloud for common action. No power in the world has the world-wide contacts that the British Empire makes with questions of disease, nutrition and racial migrations. Need I enlarge further on the third great opportunity, this third great responsibility of the British?

But I think I have said enough to expose my line of thought. I am asking for a realistic treatment of the future. I am asking that the antiquated notions sown in our minds by drum-and-trumpet history should be set on one side, and that we British, and such other powers in the world as can claim and exercise a living and leading part in the matters under consideration, should press on now for a new common objective, the New Deal, the World Planning, the World Controlling, of these great new common interests that have arisen during the last century or so of human life. International Boards for specific ends, which may become ultimately the real directorate of the common affairs of mankind.

To that complex but hopeful reconstruction, the energies, the vast experiences and the disciplines of Britain should be directed—in frank co-operation with the other great progressive populations of the planet and particularly with our kindred in America. We should put behind us every suggestion of childish isolation and national egotism. There is not even safety in that sort of safety-first dream. We British are in the world—we are all over the world—we cannot escape from the whole world. In an isolated nationalist protectionist Britain, it is absurd even to ask, 'Whither Britain?' For plainly in that case the only answer must be no whither at all, but only stick in the mud—until the scavenging forces in the world pick us up and clear us away altogether.

The Workless Speak for Themselves

Memoirs of the Unemployed. Gollancz. 5s.*

Reviewed by JACK LAWSON, M.P.

'NEWSPAPERS ALWAYS SEEM to be saying things will get better next month', says the young Casual Labourer who never has a fire in his room. 'We are always being told prosperity is round the corner, but they forget to mention which corner', writes the young Engineer's Turner who has a fine taste in music and studies economics and French.

Timely remarks from this timely book where unemployment figures yield to the human figures who speak for themselves, telling their stories in simple terms that make the dramatic art look cheap. The workless have the stage, telling how they live, how they perform miracles; what they think of it all; and the results. Plain questions were put to them and they answered them plainly. Business man, miner, skilled engineer, wood carver, ex-Army officer, house painter; young men, middle-aged men—women too. Even the electrician turned burglar tells why. And at least he is 'somebody' now. From city and village they come. England, Wales and Scotland speak.

The result is a twentieth-century Domesday Book of those who possess—nothing. Of those who are prohibited from giving service. But this book is life. There are many things in which they are agreed.

All of them thought *they* would not be long in getting work. But a superior education, craft pride, virile youth, go for nothing. Which is a warning to the complacent who think themselves above the battle. And they do, for the next stage of the workless is to be suspected by their fellows—sometimes those of their own household—of inefficiency, lack of push; even of desire. Self-confidence and nerves suffer. Faith in men and movements fades. Rock bottom. Skin for skin. Every man for himself. So does the world appear to the bereft of work. Nothing to grip, no object. Nerves.

Dr. Robb, in an appendix on Unemployment and Health, states from medical experience just what these men and women show in fact. And I, who write in the centre of Durham pits, have known it for years. But in spite of it all—O valiant hearts. They give you pride in your kind.

'If it wasn't for the wife! She's one of the best'.

'I am very fortunate in having two boys who have turned out to be good boys'.

Another pays high tribute to his last employer. How they search for the sun's ray in the overcast sky! And one makes you laugh where there is so little to joke about: 'What the children don't wear out they tear out'.

The middle-aged are steady. They have at least achieved. But the young have never had a chance and the sense of life's frustration blazes out. They are ready for anything; alert for the toxin; volcanic material.

Even the misnamed 'Means Test' comes up. For it is the Test of Destitution, and rankles. Those who comfortably compare this thing with the Income Tax investigation might think again

if they read these experiences of the destitute investigated. These stories prove beyond doubt that it is not the surplus of the few but the scarcity of the mass that is pruned. And the knife goes to the quick of pride.

Why be so sensitive? Is it that they want to hide something? Read this book and learn that to the calamity of being workless there are added continual petty reminders of their dependence, to men and women to whom independence is life. Have they not been already sorely afflicted? Let the investigator be ever so decent—and the unemployed are often sorry for him—his very appearance says 'You are a pauper'. This matter of method cuts deep and is not yet settled by a long way. All up and down the land there are heart searchings—and there is a vast reservoir of resentment. The dominant school would shape Social Services on the assumption of the permanence of this Destitution Test. But is it permanent? Read these Memoirs and then answer. The inarticulate masses of the nineteenth century were one thing, but those of today are another, in spite of many shortcomings. These unknown men and women writers are proof.

Is there malnutrition? Some of these Memoirs leave one very sure as far as they are concerned. The years of intimate experience in Durham only increase my astonishment at the way in which want can be masked by the numbers employed; aided and abetted by pride. How much more must it be in the country as a whole! The years will tell grimly what these Memoirs now indicate. There is as wide a difference in the personality of these writers as there is in the range of area and trade from which they come; and also in their views of life and their resource in facing tragic conditions. And time after time you ask yourself whether you would have the faith and courage to see it through. How many of us would find 'visits to the University College at Cardiff a wonderful event' in like circumstances to the young miner?

There is much food for thought for Trade Union officials in this book. Adaptation to new conditions is not impossible, and it is where the new position has been met that the morale has been least undermined. New methods are easier and more effective in some trades than others; but the duty is still there. These Memoirs are just in time. The 'things are improving' art is blunting the social sense. There are disquieting pointers to complacency.

For the basic truth is that the long-term unemployed are increasing, and this big dangerous problem cannot be met by welcome trade spurts. Dictators and democrats alike have it. It is the big challenging problem of the twentieth century and it will not be settled by prosperity headlines. It is men and women. Those who have written and those who have made it possible for these Memoirs to be published have rendered a service to the nation. And this new method might be further applied with profit to us all.

*These are the Memoirs first published in serial form in THE LISTENER during the summer of 1933